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The Birds of California

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Wings—A Study of Western Gulls

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Taken on Redondo Pier

The Birds of California

A Complete, Scientific and
Popular Account of the 580 Species and Subspecies of Birds
Found in the State

By

William Leon Dawson

of Santa Barbara

Director of the International Museum of Comparative Oölogy, Author of "The Birds of Ohio" and (with Mr. Bowles) of "The Birds of Washington"

Illustrated by 30 Photogravures, 120 Full-page Duotone Plates and More Than
1100 Half-tone Cuts of Birds in Life, Nests, Eggs, and
Favorite Haunts, from Photographs

Chiefly by

Donald R. Dickey, Wright M. Pierce, Wm. L. Finley
and the Author

Together with 44 Drawings in the Text and a Series of
110 Full-page Color Plates

Chiefly by

Major Allan Brooks

Format De Luxe

Patrons' Edition

Complete in Four Volumes

Volume Three

South Moulton Company

San Diego, Los Angeles, San Francisco

1923

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The Birds of California

Vol. III

Description of Species Nos. 202—307

No. 202

Gila Woodpecker

A. O. U. No. 411. **Centurus uropygialis uropygialis** Baird.

Description.—*Adult male:* Head and neck all around and most of underparts buffy drab, paler on forehead and sides of crown, where enclosing a patch of carmine; the cervix occasionally glossed with light cadmium (recalling the nuchal patch of *C. aurifrons*); the rump and upper tail-coverts white, sharply but sparingly marked with V-shaped and brace-shaped black bars; the tail black-and-white centrally, solid black on exposed edges; remaining upperparts heavily and equally black-and-white barred; the tips of wing broadly dusky, but the quills narrowly tipped with white; the center of belly light cadmium yellow; the axillars, flanks, crissum, and under aspect of tail black-and-white barred. Bill and feet black. *Adult female:* Like male, but without red on crown—drab instead. Length 203.2-254 (8.00-10.00), averaging about 228.6 (9.00); wing 130 (5.12); tail 80 (3.15); bill 30 (1.18); tarsus 22.5 (.886). Females average considerably less.

Recognition Marks.—Towhee to robin size; drab foreparts and breast, in sharp contrast with black-and-white-barred wings and tail, distinctive.

Nesting.—*Nest:* A hole in giant cactus with walls formed by dried juices of plant; also in mesquite, willow, or other tree. *Eggs:* 3-5, usually 4; white, scarcely glossy. Av. of 28 eggs from Arizona in M. C. O. coll.: 24.9 x 18.5 (.98 x .73); index 74.7. *Season:* April (Colorado River Valley), May (Santa Cruz plateau, Ariz.); one brood.

Range of *Centurus uropygialis.*—Western Mexico and Lower California north to southeastern Nevada.

Range of *C. u. uropygialis.*—That of the species minus the southern half of Lower California (*brewsteri*).

Distribution in California.—Resident in the valley of the Colorado River, where closely confined to the willow-cottonwood association and the adjacent patches of giant cactus.

Authorities.—Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 111 (spec. from Ft. Yuma); *Morcom*, Bull. Ridgway Orn. Club, no. 2, 1887, p. 42 (vic. Ft. Yuma, breeding); *Grinnell*, Univ. Univ. Calif. Pub. Zool., vol. xii., 1914, p. 133 (Colo. Valley; habits, nest and eggs, etc.); *Gilman*, Condor, vol. xvii., 1915, p. 151, figs. (life hist. in s. Ariz.).

NO BIRD-LOVER can recall the image of a sahuaro, that quaint vegetable tombstone of the desert, without at the same time focusing his mind upon this petulant, impudent, and inevitable bird. The Gila Woodpecker and the Gilded Flicker are the lawful custodians and business agents and caretakers of all properly constituted "giants." Prospective tenants, whether Elf Owls, Ash-throated Flycatchers, Western Martins, or Sparrow Hawks, must look to them for quarters. And if these renters do not always exhibit a becoming gratitude, the Gila, at least, gets it back at them by gossiping, by snooping and prying, by unquenchable criticism,

and sometimes, we fear, by downright theft. A nesting cavity in the soft bosom of one of these monumental cactuses is not a difficult thing to prepare; but it is a rather dirty job, and the delving bird gets his snuff-brown foreparts sadly smeared and stained with the slithery sahuaro juice. The excavation, moreover, requires a year in which to cure, that the surface of the cavity may develop a weathered shell which will be even measurably resistant to the percolating juices. In this cavity, then, the parent woodpeckers rear a first brood of young in April. In May or early June they are more apt to repair to the wooded bottoms, where covering foliage has now developed, to excavate a fresh nest for immediate occupancy, in willow, cottonwood, or mesquite.

In the meantime, the chief business of the Uropygian day is to spy upon neighbors, to squabble, to chatter, to shriek and chase, and in general to constitute themselves a neighborhood nuisance. In the latter function is included a systematic search for birds' eggs, especially those of the Lucy Warbler, Yellow Warbler, and Arizona Least Vireo. In case of the first-named, the eggs are devoured in spite of the most emphatic protests of the tiny parents; but eggs of Cardinal, Cooper Tanager and Towhee must be obtained by stealth. In the utter absence of jays upon our Lower Sonoran levels, the Gila Woodpeckers appear to enjoy an undisputed field. My son once saw a Gila enter, in the absence of the owner, the nest of a Gilded Flicker which contained eggs,—enter and remain for some minutes. Yet in this instance no material harm resulted. The bird was just taking notes upon her neighbor's ménage.

Curiously enough, the home life of these feathered burglars is practically ideal. The devotion of the male, especially to the eggs and young, is fairly pathetic. Supposing it to contain a full set of eggs, I once chopped out a hole in a mesquite tree, after having first thrust in a handkerchief to arrest falling chips. Upon removal of the cloth a male Gila was disclosed. He had abundant opportunity to escape—in fact, was urged to do so; yet he preferred to remain and to strike savagely at the encouraging finger. Judge of my surprise when, upon forcing him off from below, I found two perfectly fresh eggs—an incomplete set!

The young are hatched mother-naked, and, since they have no need of clothes for decency's sake nor yet for warmth, long remain so, the scandal of creation when dragged forth to light. When this disenchanting operation is attempted, the parents dance close attendance and pour out a flood of petitions—as though they had not themselves refused a dozen prayers that very day! Ah, me! consistency!—oh, well, you understand; we put the youngsters back.

We have only time left to take a drink with the Gila. Drink, Old Top, and forget old scores! I sat at an encouraging but observant dis-

Gila Woodpecker

About ⅓ life size

From a water-color painting by Allan Brooks

tance from the water-hole when my guest arrived. The water was none of the purest, quite green, in fact; but the children of the desert are not fastidious. The Woodpecker arrived ostentatiously, like a belated constable. He first bowed obnoxiously a dozen times or more, from a neighboring brush pile, then he hitched up where he could observe the small fry at their potations. A Cooper Tanager was sipping a modest beaker, and gazing, Narcissus-like, at a vision of wondrous beauty, which I, good sooth, was enjoying in double measure. The dainty Ground Doves, after a little amorous prancing, had thrust their nozzles deep into the pool and were drinking like tired horses. But now the Gila Woodpecker had come. He tittered consciously, and acknowledged his thirst by covetous glances. Then he sought a branch which descended sharply into deep water, and down this he advanced cautiously, by tittering hitches. Down and down the dread descent he went, until at last his tail, his handsome, black-and-white-barred tail, was partially submerged. Then the bird tilted forward and selected one drop of water. This was allowed to trickle down his throat with every appearance of satisfaction, the while his tail went souse again into the water. Then another drop was selected, and another, until by and by he had established a regular pump-motion between bill and tail: dip, souse; dip, souse; dip, souse—and all the while he clung sidewise to a perpendicular twig. *Dum vivimus vivamus!*

No. 203

Yellow-shafted Flicker

A. O. U. No. 412a. **Colaptes auratus borealis** Ridgway.

Synonyms.—Flicker. Boreal Flicker (Ridgway). Northern Yellow-shafted Flicker (name now restricted to *C. a. luteus*). Northern Flicker. Golden-winged Woodpecker. Yellow-hammer. High-hole. High-holder. Pigeon Woodpecker. Wake-up.

Description.—*Adult male:* Top of head and cervix ashy gray, with a vinaceous tinge on forehead; a bright scarlet band on back of neck; back, scapulars, and wings vinaceous gray, with conspicuous black bars, brace-shaped, crescentic, or various; primaries plain dusky on exposed webs; lining of wings and shafts of wing-quills yellow (lemon-chrome to primuline yellow); rump white; upper tail-coverts white, black-barred in broad "herring-bone" pattern; tail double-pointed, black, and with black shafts on exposed upper surface; feathers sharply acuminate; tail below, golden-yellow and with yellow shafts, save on black tips; chin, sides of head, and throat vinaceous, enclosing two broad black malar stripes, or moustaches; a broad black pectoral crescent; remaining underparts white with heavy vinaceous shading on breast and sides, every-

where marked with sharply defined and handsome round, or cordate, spots of black. Bill and feet dark plumbeous. *Adult female:* Similar, but without black moustache. Sexes about equal in size. Length 279.4-323.9 (11.00-12.75); wing 162.5 (6.40); tail 106.2 (4.18); bill 36 (1.42); tarsus 28.9 (1.14).

Recognition Marks.—Robin size; pectoral black crescent, white rump, black-spotted breast, bill slightly curved, etc. (in common with *C. cafer*); *yellow* flickerings in flight, scarlet nuchal band, *black* malar stripe (of male), in contrast with *C. cafer*.

Nesting.—Does not breed in California. *Nest:* An excavation in tree or stump, usually made by the bird, at moderate heights; unlined, save by chips. *Eggs:* 4-10, usually 7 or 8; glossy white. Av. size 27.7 x 21.6 (1.09 x .85).

Range of *Colaptes auratus*.—Northern and eastern North America from the limit of trees to the Gulf Coast.

Range of *C. a. borealis*.—Breeds in northern North America from Labrador along the limit of trees to the Kowak River and Bering Sea, south to northern Ontario, Minnesota, and eastern Wyoming. Winter range not yet clearly distinguished, but stragglers, at least, occur down the Pacific Coast to southern California.

Occurrence in California.—Not common winter visitor chiefly west of the Sierras. (Santa Barbara, Nov. 4, 1911; Jan. 23, 1915; Nov. 29, 1919, 4 birds).

Authorities.—**Ball** (*Colaptes auratus*), Auk, vol. ii., 1885, p. 383 (San Bernardino); *Swarth*, Condor, vol. iii., 1901, p. 66 (Los Angeles, one spec.); Condor, vol. xii., 1910, p. 107 (hybrid); *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 82 (status in Calif.).

WE ARE always chiding our undiscriminating friends for calling the Flickers of California "Yellow Hammers," whereas the birds are red. But once in a coon's age the guess is correct. Flickers with *yellow* shafts do occur, now and then, but chiefly in winter, in very diverse sections of the State. And when they are found, there are four possibilities to choose from: Either (1) the bird is a simon-pure *C. a. borealis* from Alaska; or else (2) it is a hybrid from northwestern British Columbia where *C. a. borealis* and *C. cafer saturatior* interbreed; or (3) it is a hybrid from central Alberta where *C. a. luteus* and *C. c. collaris* meet; or else (4) it illustrates a rare dicroic phase of *Colaptes cafer* itself. Evidence upon the last-named point has not yet been duly arrayed. It would manifestly require to be supported by breeding birds, but that dichroism is a very probable explanation of some of the occurrences recorded in the name of *C. auratus*, is clearly suggested by the dichromatic situation known to exist in the case of the Gilded Flicker, *C. chrysoides mearnsi*. Without much doubt, also, some of the yellowed examples from California are true hybrids. The re-amalgamation, in Alberta and Saskatchewan, of two races of *Colaptes*, long separated, is one of the romances of American ornithology. But most interesting of all, for our present consideration, is the fact that a form now dominant in Alaska, and which reached that station by the familiar northwest flight-line, occasionally sends stragglers

directly south. Grinnell in his Distributional List (1915) allows three such "pure blood" records, including one, a female, from Los Angeles (Feb. 20, 1901). I have noted two occurrences at Santa Barbara, which I am thoroughly satisfied were those of true *auratus;* first, Nov. 4, 1911, a single bird seen in the sand dunes west of La Patera; and second, four birds, Nov. 29, 1919, two of which, both females, were closely studied by the Bird Club in a walnut grove near Goleta.

No. 204

Red-shafted Flicker

No. 204a Red-shafted Flicker

A. O. U. No. 413. **Colaptes cafer collaris** Vigors.

Synonyms.—Red-winged Woodpecker. High-holder. "Yellow-hammer." Pigeon Woodpecker.

Description.—*Adult male:* Similar to *C. auratus borealis*, but yellow of feather-shafts, etc., replaced by orange-vermilion (flame-scarlet on shafts, quills, and rectrices; grenadine on lining of wings); cast of upper plumage correspondingly reddish (very faintly, a mere vinaceous tinge to the brown); no scarlet nuchal patch; a broad malar stripe of scarlet (replacing the black stripe of *C. a. borealis*); sides of head, and throat, clear bluish ash; underparts tinged with lilaceous (palest orient pink). *Adult female:* Like male, but scarlet malar stripe replaced by vinaceous brown, or else gray like throat. *Young birds* are like adults, but duller; top of head overlaid with warm brown, and throat more or less washed with brownish. Length (averaging a little more than that of *C. auratus borealis*): 279.4-336.55 (11.00-13.25); wing 165 (6.50); tail 110 (4.34); bill 37.5 (1.48); tarsus 29.3 (1.15).

Remarks.—Between this and *C. auratus borealis* or *luteus* every form of gradation exists. Hybrids, for such they really are, most frequently reveal themselves by the presence of *three* scarlet patches (in the male), i. e., two malar and one nuchal. The "illumination" of the wings and tail in these hybrids also varies interminably through muddy yellows, ochres, and cadmiums. These two species illustrate in the most perfect manner the effect of contact between closely related stocks, long separated, which meet again after specific differences have become thoroughly established. The hybrids produced along the line, or rather, throughout the interpenetrated area of contact, are fertile, but so constant is the influx of fresh, pure stock that there is no evidence of a tendency to fix a standard of intermediate character. The "Hybrid" Flicker (*C. auratus* x *C. cafer*) is not yet a species.

Recognition Marks.—Robin size; brown finely barred with black above; underparts heavily spotted with black; flame-color of under wing surface prominent in flight; scarlet malar stripe of male distinctive; lighter than succeeding.

Nesting.—Much as in *C. a. borealis*, and eggs indistinguishable. For nesting sites bird makes use of wooden buildings or earth-banks, in default of trees. Av. size of eggs 28.4 x 21.6 (1.12 x .85). *Season:* May; one brood, rarely two.

Range of *Colaptes cafer.*—Western North America from southern Alaska to southern Mexico.

Range of *C. c. collaris.*—Western United States and southwestern British Provinces (except Northwest coast strip), and northern Mexico.

Distribution in California.—Common resident of Upper Sonoran and Transition zones practically throughout the State, except in the humid Transition of the extreme Northwest. Breeds locally in Boreal zone, and ranges freely to timberline. In winter, numbers greatly augmented by accessions from the North, at which season also it may be found upon the deserts.

Authorities.—Vigors (*Colaptes collaris*), Zool. Jour., vol. iv., 1829, p. 354 (orig. desc.; Monterey); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 55 (San Joaquin Valley, habits, etc.); *Wetmore*, Condor, vol. xviii., 1916, p. 112 (speed of flight); *Stoner*, Condor, vol. xxiv., 1922, p. 54 (study of roosting holes).

No. 204b Northwestern Flicker

A. O. U. No. 413a. **Colaptes cafer saturatior** Ridgway.

Description.—Like *C. c. collaris*, but larger and darker; ground-color of upperparts burnt umber with a purplish tinge; ground-color of underparts vinaceous buff to color of back; sides of head and throat deep smoke-gray; pileum cinnamomeous. Length up to 355.6 (14.00); wing 168.5 (6.635); tail 118 (4.65); bill 39.4 (1.55); tarsus 30 (1.18).

Remarks.—Specimens in the Provincial Museum at Victoria, B. C., indicate hybridization between this form and *C. auratus borealis*. Of 27 males from Vancouver Island nine possess in whole or in part the scarlet nuchal patch characteristic of *auratus*. Presumably, therefore, many of the winter visitant hybrids which reach our coasts are between these two forms, *C. c. saturatior* and *C. c. borealis*.

Recognition Marks.—As in preceding; darker.

Nesting.—*Nest:* As in preceding species. *Eggs:* 6-9; av. of 33 specimens from Eureka in M. C. O. coll.: 28.7 x 22.25 (1.13 x .876); index 76.6; range 26.4-32 by 20.8-23.4 (1.04-1.26 by .82-.92). *Season:* May–June; one brood.

Range of *C. c. saturatior.*—Humid Transition zone of the Northwest coast district from Humboldt Bay, California, to Sitka, Alaska.

Distribution in California.—Resident in the extreme northern coastal strip. Intergrades widely with *collaris* upon east and south.

Authorities.—Townsend, Proc. U. S. Nat. Mus., vol. x., 1887, p. 206 (Red Bluff); *Anderson and Grinnell*, Proc. Acad. Nat. Sci. Phila., 1903, p. 9 (Siskiyou Mts., crit.); *Swarth*, Univ. Calif. Pub. Zool., vol. vii., 1911, p. 70 (s. e. Alaska, distr., habits, crit.); *Palmer*, Auk, vol. xxxiii., 1916, p. 322 (nomencl.).

THE STUPIDITIES of nomenclature are nowhere more clearly illustrated than by the case of this species, the first example of which fell into the hands of a "closet naturalist," Gmelin. This doughty bird-namer, who was working over a miscellaneous collection, supposed that the specimen he was handling hailed from Africa, and he, accordingly, named it *Cafer* (i. e., Kaffir). The "law of priority" is inexorable. How else could the diluted output of our subspeciologists be saddled upon posterity!

Red-shafted Flicker

About ½ life size

From a water-color painting by Major Allan Brooks

Taken in Oregon *Photo by Finley & Bohlman*

YOUNG NORTHWEST FLICKERS

Hence, we have a host of black men, Kaffirs, swarming over California, along with "Indians" who are ten thousand miles from India. But in this case the stupidity of "Science" is matched by the perverse carelessness of the man on the street (or, perchance, the man with the hoe) who calls the bird "Yellowhammer." *Cafer's* cousin, *auratus*, of the East, is yellow, and it hammers, although the Yellowhammer (or, more properly, the Yellow Ammer) is an Old World bird (*Emberiza citrinella*), guiltless of knocking. *C. cafer*, on the other hand, does hammer, but its trappings are of flame-scarlet, instead of cloth-of-gold. Call it Redhammer, then, if you will—and by so doing, you will add only one more to the *six or seven score* of nicknames by which the American flickers are known. For the flicker, under whatever local pseudonym he may flutter, is one of the best diffused and most familiar of American birds. And because in respect to song and behavior the western bird, *cafer*, does not differ materially from the eastern species, *auratus*, I venture to quote again three paragraphs from "The Birds of Ohio."

"It is perhaps as a musician that the Flicker is best known. The word musician is used in an accommodated sense, for the bird is no professional

singer, or instrumental maestro; but so long as the great orchestra of Nature is rendering the oratorio of life, there will be place for the drummer, the screamer, and the utterer of strange sounds, as well as for the human obbligato. The Flicker is first, like all other woodpeckers, a drummer. The long rolling tattoo of early springtime is elicited from some dry limb or board where the greatest resonance may be secured, and it is intended both as a musical performance and as a call of inquiry. Once, as a student, the writer roomed in a large building, whose unused chimneys were covered with sheet-iron. A Flicker had learned the acoustic value of these elevated drums, and the sound of this bird's reveille at 4:00 a. m. was a regular feature of life at 'Council Hall.'

Taken in Oregon *Photo by A. W. Anthony*

NEST AND EGGS OF RED-SHAFTED FLICKER

"The most characteristic of the bird's vocal efforts is a piercing call delivered from an elevated situation, *clape* or *kly-ak*, and *cheer* or *kee-yer*. The scythe-whetting song is used for greeting, coaxing or argumentation, and runs from a low *wee-co, wee-co* —through *wake-up, wake-up, wake-up*—to an emphatic *wy'-kle, wy'-kle, wy'-kle*, or, in another mood, sounds like *flicker, flicker, flicker*.

"In the early days of April, courtship is in progress, and the love-making of the Flicker is both the most curious

Taken in Pasadena *Photo by Donald R. Dickey*

RED-SHAFTED FLICKER ON NESTING BOX

and the most conspicuous of anything in that order. An infatuated Flicker is a very soft and foolish-looking bird, but it must be admitted that he thoroughly understands the feminine heart, and succeeds in love beyond the luck of most. A bevy of suitors will lay siege to the affections of a fair lady, say in the top of a sycamore tree. Although the rivalry is fierce, one gallant at a time will be allowed to display his charms. This he does by advancing toward the female along a horizontal limb, bowing, scraping, pirouetting, and swaying his head from side to side with a rhythmical motion. Now and then the swain pretends to lose his balance, being quite blinded, you see, by the luster of milady's eyes, but in reality he does it that he may have an excuse to throw

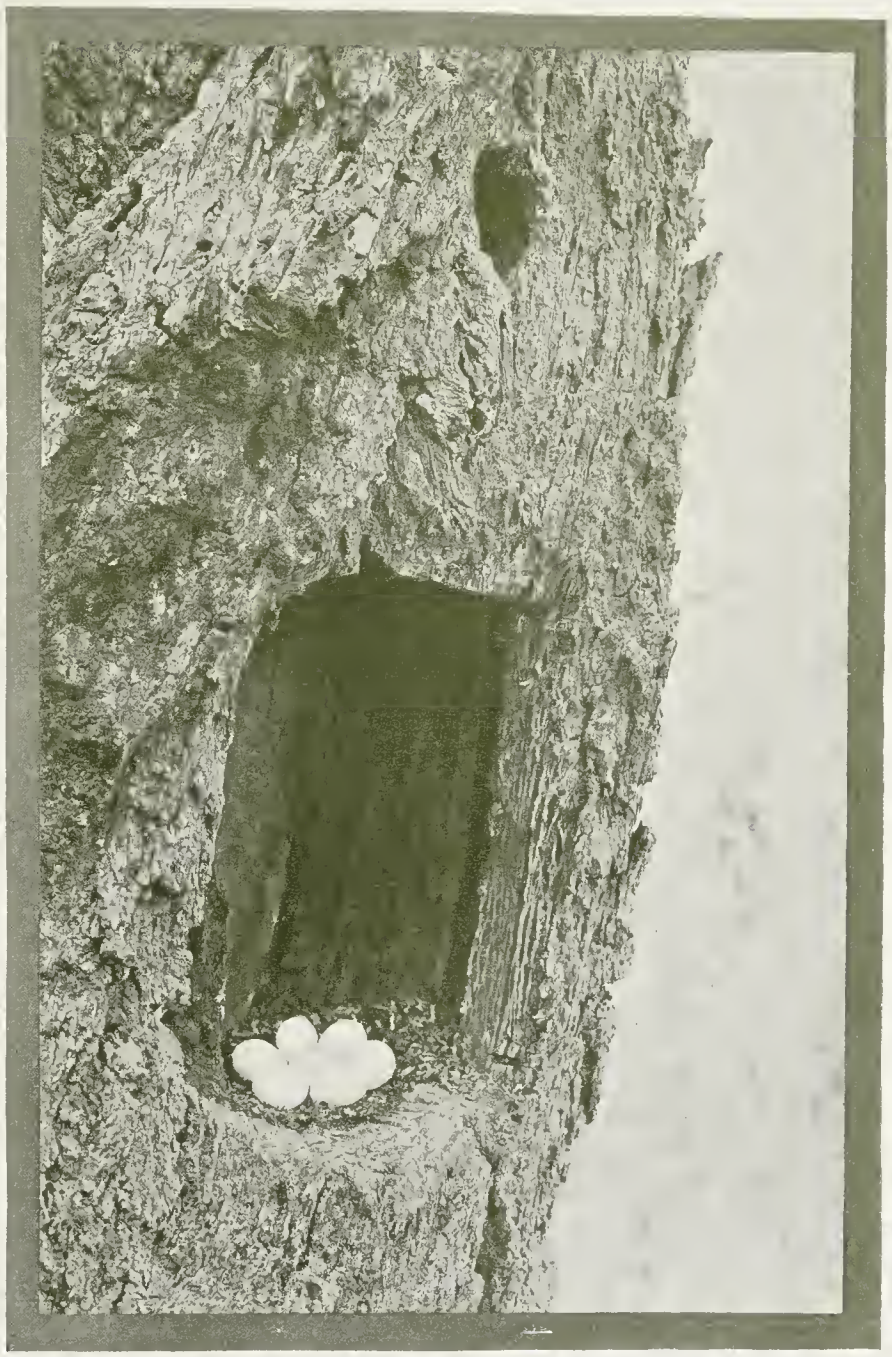
up his wings and display the dazzling flame which lines them. The lady is disposed to be critical at first, and backs away in apparent indifference, or flies off to another limb in the same tree. This is only a fair test of gallantry and provokes pursuit, as was expected. Hour after hour, and it may be day after day, the suit is pressed by one and another until the maiden indicates her preference, and begins to respond in kind by nodding and bowing and swaying before the object of her choice, and to pour out an answering flood of softly whispered adulation. The best of it is, however, that these affectionate demonstrations are kept up during the nesting season, so that even when one bird relieves its mate upon the eggs it must needs pause for a while outside the nest to bow and sway and swap compliments."

Nature has not always dealt justly with the western Flicker in the matter of providing an abundance of dead timber for nesting sites. What more natural, then, than that the stinted bird should joyfully fall upon the first "frame" houses and riddle them with holes? The front door of a certain country parsonage testifies to at least one pastoral vacation, by the presence of three large Flicker holes in its panels. The church, hard by, is dotted with tin patches which conceal this bird's handiwork; and the mind recalls with glee how the irreverent Flicker on a summer Sunday replied to the parson's fifthly, by a mighty *rat-at-at-at-at* on the weather siding. The district schoolhouse of a neighboring township is worst served of all, for forty-one Flicker holes punctuate its weather-beaten sides—reason enough, surely, for teaching the young idea of that district how to shoot. Indeed, the school directors became so incensed at the conduct of these naughty fowls that they offered a bounty of ten cents a head for their destruction. But it is to laugh to see the fierce energy with which these birds of the plains, long deprived of legitimate exercise, fall to and perforate such neglected outposts of learning. The bird becomes obsessed by the idea of filling a particular wall full of holes, and no ingenuity of man can deter him. If work during union hours is discouraged, the bird returns stealthily to his task at four a. m., and chisels out a masterpiece before breakfast. If the gun speaks, and one bird falls a martyr to the sacred cause, another comes forward promptly to take his place, and there is always some patriotic Flicker to uphold the rights of academic research.

Of course the situation is much relieved in the timbered foothills and along the wooded banks of streams, where rotten stubs abound. The Flicker is at home, also, to the very limit of trees on all our mountains,—as "boreal," therefore, as any bird, save the Rosy Finch and the Rock Wren. It is not found during the breeding season upon the warmer deserts, although abundant there in winter; and in general, it is a lover

of cool, moist situations, if these are also comparatively open. Nests are usually excavated in the month of April, or from that to June, according to elevation; and any tree or stump may serve as host. In a northern locality I saw a Flicker's nest in a stump only two feet high, and its eggs rested virtually upon the ground. Others occur in live willows, cottonwoods, oaks (whether black or white), and apple trees. Pine and fir stubs have their uses also; and I have seen nests, a few, sixty feet up in dead pine trees. The birds nest also in the walls of buildings, in which case they lug in chips to lay on beam or sill, and so prevent the eggs from rolling. In southern California the Flicker occasionally nests in banks, after the fashion of Kingfishers; but in such instances the nests are easily recognized by their larger size, and by the exaggerated key-hole shape of the entrance.

From six to ten highly polished, semi-transparent, white eggs are laid upon the rotten wood or chips which usually line a nest; and incubation begins, customarily, when the last egg is laid. Bendire notes an instance, in the



Taken in Sespe *Photo by Dickey*

THE HOLE STORY

Blue Mountains of Oregon, of a Flicker's nest which contained at one time three young birds just hatched, two pipped eggs, and five perfectly fresh eggs, of which one was a runt.

The female is a close sitter, and instances are on record in which pebbles dropped in upon her have failed to dislodge her; or in which, once being lifted off, she brushed past the disturber to re-enter the nest. Although provided with a bill which might prove a formidable weapon, the Flicker is of too gentle a nature to wield it in combat, and seldom offers any resistance whatever to the intruder.

After fourteen days young birds are hatched, blind, ugly, helpless. In a few days more, however, they are able to cling to the sides of the nesting hollow, and are ready to set up a clamor upon the appearance of food. This noise has been compared to the hissing of a nest of snakes, but as the nestlings grow, it becomes an uproar equal to the best efforts of a telephone pole on a frosty morning.

The young are fed entirely by regurgitation, not an attractive process, but one admirably suited to the necessities of long foraging expeditions and varying fare. When able to leave the nest, the fledglings usually clamber about the parental roof-tree for a day or two before taking flight. Their first efforts at obtaining food for themselves are usually made upon the ground, where ants are abundant. These, with grasshoppers and other ground-haunting insects, make up a large percentage of food, both of the young and adults. It is worthy of remark what an effective instrument the Flicker has in its tongue. This member can easily be extended two and a half inches beyond the tip of the bill, or three, if forced by hand. To accomplish this feat the supporting bones of the base, the hyoids, have undergone an extraordinary elongation. Not content with merely wrapping about the entire skull just beneath the skin, as do the hyoids of other woodpeckers, these escape at the forehead and, *re-entering the right nostril from the outside,* push their way clear to the tip of the bill through a hollow of the upper mandible. The skull of the Flicker has become a sort of pulley block, over which the mobile, cord-like hyoids play incessantly. When feeding upon ants, the Flicker protrudes its tongue, and lets it lie along the ground for a moment until the little victims swarm over its surface and are engaged by its viscid coating. A sudden withdrawal assures a feast and the number of ants which the bird can bag in this fashion is amazing. Five thousand of a small species (*Crematogaster sp.*) were found by Beal in a single stomach—these and a portion of sand incidentally acquired.

No. 205

Mearns's Gilded Flicker

A. O. U. No. 414b. **Colaptes chrysoides mearnsi** Ridgway.

Description.—General pattern that of preceding forms, but color of upperparts lighter in tone and the black barring greatly reduced; the illumination of wings and tail in normal plumage similar to that of *C. auratus*, the distribution of red on head exactly that of *C. cafer*. *Adult male in normal* (yellow) *plumage:* Nasal tufts and pileum warm cinnamon-brown (sayal brown); back and wings wood-brown, lightly and narrowly but increasingly (proceeding backward) spotted or barred with black; rump broadly white; upper tail-coverts white barred with black; tail, including exposed (dorsal aspect) quills, black; quills dusky on exposed webs, their shafts, together with distal portion of under surface and basal portion of exposed lower rectrices, golden yellow (light cadmium); the basal portion of quills (inner webs and under surface) and wing-lining lighter (buff-yellow or warm buff); throat and sides of head and neck bluish ashy, interrupted by broad scarlet-red malar stripe; a black pectoral patch and remaining underparts lilaceous or pale orient pink, heavily marked with rounded or cordate black spots (quite as in the other members of *Colaptes*). *Adult male, rufescent phase:* As in foregoing, but illumination of wings and tail orange-pink (the shafts bittersweet pink, the lighter linings orient pink). *Adult female* (both phases): Similar to male, but without malar red stripe—plain bluish gray instead. Av. of 7 Colorado River specimens: Length 274.83 (10.82); wing 148 (5.83); tail 92 (3.62); bill 36.4 (1.43).

Remarks.—A dwarfed and pallid (older?) brother of *Colaptes cafer*, probably differentiated by isolation in Lower California, and recently invading southeastern California and Arizona from the southwest. The normal yellow illumination of wing again points to close relationship existing between *C. auratus* and *C. cafer*, while the variant red phases found by Grinnell and others in the Colorado River valley appear to be due, as Grinnell suggests, rather to chemico-physiological changes than to hybridization with *C. c. collaris*.

Recognition Marks.—Robin size; general marks of preceding species; lighter color tone and golden illumination of wings and tail distinctive in range.

Nesting.—Breeds chiefly in holes in sahuaro cactus, but also in mesquite, willow, etc. *Eggs:* 4; glossy, white. Av. of 45 specimens in M. C. O. coll.: 27.4 x 20.6 (1.08 x .81); index 75; range 24.1-30.8 by 19.1-22.6 (.95-1.21 by .75-.89). *Season:* April–May 15; one brood, rarely two.

Range of *Colaptes chrysoides*.—Lower Sonoran zone in southeastern California, southern Arizona, Sonora, and Lower California.

Range of *C. c. mearnsi*.—That of the species minus Lower California.

Occurrence in California.—Resident on the west bank of the Colorado River above the Laguna Dam.

Authorities.—H. Brown (*Colaptes chrysoides*), Condor, vol. vi., 1904, p. 46 (Calif. side, Colo. R.); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 135 (Colo. Valley, habits; crit.); *Gilman*, Condor, vol. xvii., 1915, p. 160, figs. (s. Ariz., habits, nest, eggs); *Howell and van Rossem*, Condor, vol. xvii., 1915, p. 233 (Colo. Valley, near Potholes in winter).

The Mearns Gilded Flicker

IT IS—it is—the Gilded Flicker! He takes flight from a palo verde, and we get a flash of authentic gold as he lights against the side of a giant cactus (as though it were not at all beset with spines, that should be fearful). He shouts, *Culloo' cullitoo'*, with jovial pretense of fear, and bows emphatically with disarming waggishness. It is our old friend, the Flicker, surely none other, known from seaboard to seaboard, and from New Orleans to—one had almost said "the Pole." Yes; but his voice is a little thinner; and the shafts of his quills with the accompanying illumination of the webs, are *golden*, instead of grenadine (red). For the rest it is our Flicker, and, save as influenced in habit by special conditions, the self-same bird which blessed our childhood.

The distribution of the Gilded Flicker is almost exactly coincident with that of the sahuaro, or "giant cactus." There is only one conspicuous stand of this plant left in California, that occurring just above the Laguna Dam on the Colorado River. But wherever the presence of the suhuaro affords an excuse for the bird, the latter is apt to occupy neighboring timber as well, whether mesquite, cottonwood, or willow. It is for this reason that the present flicker population of the Colorado River "bottoms" somewhat exceeds the accommodations provided by the modest remnant of "desert candelabra."

The hospitality of the giant cactus on its native desert is almost unbounded. Its fleshy columns, flanked by fluted arms no less hospitable, shelter not only woodpeckers and owls, but wrens, martins, flycatchers, hawks, doves, and ravens. The gracefully upturned branches, though themselves a dead weight upon the parent stem, will support a man's weight beside, and there is always room for a hawk's nest at their clustering bases. The succulent flesh of the sahuaro is guarded externally by a series of bristling spines, and it is supported internally by a concentric row of woody ribs, which gather strength as the plant rears itself to an impressive height, 25, 30, or even 40 feet. An isolated plant of good size is sure to contain several nesting holes, and a veteran is riddled with them, each the scene of some domestic venture present or past, and most of them cherishing a lively expectation of repeated occupancy. The sahuaro, moreover, furnishes not only lodging, but a very substantial "board," in the shape of luscious fruits borne in profusion upon the growing crown, or upon the ends of the branches. Its body, however, is not largely subject to decay, and the proportion of moribund giants is a small one. When one of them does finally disintegrate, it is a pathetic sight to see in its last stages the weathered outlines of the ancient nesting hollows, each like a quaint gourd, persisting after the supporting tissues have perished. It was the Flicker, no doubt, who discovered, or perfected, this curative hardening process

which attends upon any exposure of the sahuaro tissue, as upon the excavation of a nest.

For the Gilded Flicker is at once janitor and high priest of the Sahuaro. It is he who prepares, with Cousin Gila (*Centurus uropygialis*), most of the lodgings, and he does this with rare and conscious foresight. Scorning for himself a second-hand dwelling, even his own, the industrious flicker delves out the nesting hollow *a year ahead.* And whenever this attractive hollow happens to please a braver or less considerate bird, a Purple Martin or an Elf Owl, the poor flicker has to delve again. And because this has happened many, many times, the patient bird just keeps on digging, so that there will surely be enough for all.

Perhaps it is for this reason, also, that the Gilded Flicker rears a much smaller family than does either of his close kinsmen, *Colaptes cafer* or *C. auratus.* Four eggs is the almost invariable rule for *Colaptes chrysoides.* Nesting is undertaken in early April, and second broods are reared occasionally, although much less frequently than is the case with the Gila Woodpecker. Flickers' eggs are crystal white, and so transparent for the first day or so that one can determine from the outside the precise stage of incubation. After that, the shells become opaque or partially discolored.

Gilded Flickers are neither as confiding nor as demonstrative as are the related species. Without cover, they must flee at the approach of danger; and there is no safe "middle distance" from which to upbraid the intruder. If there are young, however, the mother bird will return to the home tree and say, *whoo' hoo hoo, whoo' hoo hoo,* in a very anxious voice. You can have mine, birdie; I don't want 'em.

No. 206

Western Belted Kingfisher

A. O. U. No. 390a. **Megaceryle alcyon caurina** (Grinnell).

Synonym.—Commonly called plain "KINGFISHER."

Description.—*Adult male:* Upperparts, sides of head, and a broad pectoral band slaty blue (green-blue slate), the feathers chiefly with blackish shafts; feathers of crown prolonged into loose occipital crest, and these with broader black central stripes; the wing-coverts and inner primaries sharply and finely, the secondaries broadly, tipped with white; edge of wing and exposed primaries black; the primaries white-spotted centrally on outer webs, and nearly pure white on inner webs; concealed portions of tail-feathers black, sharply barred or spotted-and-barred with white; a touch of white in front of eye, and lower eyelid white; sides mingled slaty and white;

WESTERN BELTED KINGFISHER

remaining underparts pure white. Bill black, changing to yellow at base of lower mandible; feet dark with yellow soles. *Adult female:* Similar, but with sides, axillaries, and an irregular band across lower breast, cinnamon-rufous. *Immature:* Like adults, except that slaty blue band of chest is heavily mixed with rusty. Length 317.50-355.6 (12.50-14.00); wing 163 (6.42); tail 92 (3.62); bill 59.3 (2.33); tarsus 11.4 (.45). Females slightly larger.

Recognition Marks.—"Kingfisher" size; blue-gray and white coloration; piscatorial habits; rattling cry.

Nesting.—*Nest:* At end of tunnel in bank, 4 to 6 feet in, unlined. *Eggs:* 6 to 8; pure white. Av. size 33.3 x 26.4 (1.31 x 1.04). *Season:* May; one brood.

Range of *Megaceryle alcyon.*—North America and northern South America. Breeds from Mackenzie and Labrador south to southern border of the United States; winters from British Columbia, Nebraska, Ohio, and Virginia, south through the West Indies to Guiana and Colombia.

Range of *M. a. caurina.*—Western North America, east to and including the Rocky Mountains; breeding from northern Alaska south at least to southern California; wintering irregularly from British Columbia south through western Mexico and Lower California.

Distribution in California.—Common migrant both east and west of the Sierras. A common breeder in northern portion of the State and along the Sierras to Yosemite Valley and Owens Valley; also breeding and possibly sedentary south, regularly, to Santa Barbara, Santa Paula, and Santa Cruz Island. In winter common

along the sea-coast in the San Diegan district, less common northerly, at least to Tomales Bay (Mailliard).

Authorities.—Vigors (*Alcedo alcyon*), Zool. Voy. "Blossom," 1839, p. 16 (San Francisco); *Carpenter*, Condor, vol. xix., 1917, p. 22 (Escondido, breeding); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 60 (s. Calif. ids.); *J. Mailliard*, Condor, vol. xxiii., 1921, p. 194 (Marin Co., nesting habits).

WHEN we were small boys and had successfully teased our fathers or big brothers to let us go fishing with them, we were repeatedly admonished not to "holler" for fear of scaring the fish. This gratuitous and frequently emphatic advice would have been discredited if the example of the Kingfisher had been followed. Either because noise doesn't matter to fish, or because he is moved by the same generous impulse which prompts the mountain lion to give fair and frightful warning of his presence at the beginning of an intended foray, the bird makes a dreadful racket as he moves upstream and settles upon his favorite perch, a bare branch overlooking a quiet pool. Here, although he waits long and patiently, he not infrequently varies the monotony of incessant scrutiny by breaking out with his weird rattle—like a watchman's call, some have said; but there is nothing metallic about it, only wooden. Again, when game is sighted, he rattles with excitement before he makes a plunge; and when he bursts out of the water with a wriggling minnow in his beak, he clatters in high glee. If, as rarely happens, the bird misses the stroke, the sputtering notes which follow speak plainly of disgust, and we are glad for the moment that Kingfisher talk is not exactly translatable.

It is not quite clear whether the bird usually seizes or spears its prey, although it is certain that it sometimes does the latter. The story is told of a Kingfisher which, spying some minnows in a wooden tub nearly filled with water, struck so eagerly that its bill penetrated the bottom of the tub, and so thoroughly that the bird was unable to extricate itself; and so died—a death almost as ignominious as that of the king who was drowned in a butt of Malmsey wine.

When a fish is taken, the bird first thrashes it against its perch to make sure it is dead, and then swallows it head foremost. If the fish is a large one its captor often finds it necessary to go through the most ridiculous contortions, gaspings, writhings, chokings, regurgitations, and renewed attempts, in order to encompass its safe delivery within.

Kingfishers have the reputation of being very unsocial birds. Apart from their family life, which is idyllic, this reputation is well sustained. Good fishing is so scarce that the birds deem it best to portion off the territory with others of their own kind, and they are very punctilious about the observance of boundaries and allotments. For the rest, why

should they hunt up avian companions, whose tastes are not educated to an appreciation of exposed, water-soaked stubs, and a commanding view of river scenery? However, I did once see a Kingfisher affably hob-nobbing with a Kingbird, on a barren branch which overlooked a crystal stream in Idaho. I wonder if they recognized a mutual kingliness, this humble fisherman and the petulant hawk-driver?

Taken in Oregon *Photo by A. W. Anthony*

THE KING ROW

Kingfisher courtship is a very noisy and spirited affair. One does not know just how many miles up and down stream it is considered proper for the gallant to pursue his enamorata before she yields a coy acceptance; and it is difficult to perceive how the tender passion can survive the din of the actual proposal, where both vociferate in wooden concert to a distracted world. But la! love is mighty and doth mightily prevail.

The nesting tunnel is driven laterally into the face of a steep bank, preferably of sand or loam, usually directly over the water, but occasionally at a considerable distance from it. Dr. Brewer reports one in a gravel pit at least a mile from water. The birds are not so particular as are the Bank Swallows about digging near the top of the bank, but, especially if the bank is small, usually select a point about midway. The tunnel goes straight in or turns sharply to suit an occasional whim, until a convenient depth, say five or six feet, is reached, when a considerable enlargement is made for the nest chamber. Here, early in May, six or

seven white eggs are laid, usually upon the bare earth, but sometimes upon a lining of grass, straw and trash. From time to time the birds eject pellets containing fish scales, the broken testæ of crawfish and other indigestible substances, and these are added to the accumulating nest material. Sanitary regulations are not very strict in Kingfisher's home, and by the time the young are ready to fly we could not blame them for being glad to get away. The female is a proverbially close sitter, often permitting herself to be taken with the hand, but not until after she has made a vigorous defense with her sharp beak. If a stick be introduced into the nest, she will sometimes seize it so tightly that she can be lifted from the eggs, turtle-fashion.

The parents are very busy birds after the young have broken shell, and it takes many a quintal of fish to prepare six, or maybe seven, lusty fisher princes for the battle of life. At this season the birds hunt and wait upon their young principally at night, in order not to attract hostile attention to them by daylight visits. Only one brood is raised in a season, and since fishing is unquestionably a fine art, the youngsters require constant supervision and instruction for several months. A troop of six or eight birds seen in July or August does not mean that Kingfisher is indulging in midsummer gaieties with his fellows, but only that the family group of that season has not yet been broken up.

No. 207

Poorwill

No. 207 Nuttall's Poorwill

A. O. U. No. 418. **Phalænoptilus nuttalli nuttalli** (Audubon).

Description.—*Adult:* A central patch of pure silky white across lower throat; below this, in abrupt contrast, a band of black; lining of wings clear ochraceous buff; under tail-coverts clear creamy buff; the three outer pairs of tail-feathers tipped broadly but decreasingly with white or buffy white; remaining plumage an exquisite complex of skeletonized black centers of feathers with buffy and intermingled dusky marginings, the whole producing a frosted or tarnished-silvery effect; black most conspicuously outcropping on scapulars and on center of crown; buffy "silvering" most complete on sides of crown, wing-coverts, and upper surfaces of tail-feathers; black of underparts appearing chiefly as bars, where also mingled with pale buffy brown; flight-feathers finely and fully banded, ochraceous and blackish. Bill black; feet (drying) dark brown; iris brown. *Young birds* are much like adults, but the ochraceous element inclines to rufescence, pale cinnamon instead of buffy; throat entirely ochraceous buff. Length 177.8-215.9 (7.00-8.50); wing 142 (5.60); tail 88.9 (3.50); bill 12 (.47); tarsus 17.6 (.69).

Recognition Marks.—Strictly towhee size, but appearing larger; smaller than a Nighthawk, which it superficially resembles in coloration. *Poorwill* cry heard a hundred times to once the bird is seen. Paler than *californicus;* darker than *nitidus.*

Nesting.—*Eggs:* 2; laid upon the bare ground; pure white (or with a faint pinkish tinge when fresh); oval to blunt elliptical-oval in shape. Av. size 25.2 x 19 (.99 x .75). *Season:* c. June 1st; one brood.

Range of *Phalænoptilus nuttalli.*—Western North America from the plains to California and from south-central British Columbia, south in winter to central Mexico.

Range of *P. n. nuttalli.*—That of the species minus the Pacific Coast district, broadly, and the southern portion of summer range (roughly Kansas to southeastern California).

Distribution in California.—Summer resident of Upper Sonoran and Transition areas east of the Sierras, from Death Valley northward, and through the northern counties west at least to Yreka, Siskiyou County. Winters in the southern portion of its range and irregularly southward over the deserts and in the valley of the Colorado.

Authorities.—**Cooper** (*Antrostomus Nuttalli*), Orn. Calif., 1870, p. 341 (mts., west of Colo. Valley); *Fisher*, N. Am. Fauna, no. 7. 1893, p. 51 (localities in s. e. Calif.); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 139 (Colo. Valley; occurrence, habits, crit.).

No. 207a Frosted Poorwill

A. O. U. No. 418a. **Phalænoptilus nuttalli nitidus** Brewster.

Synonym.—Brewster's Poorwill.

Description.—Similar to *P. n. nuttalli*, but paler throughout and a little smaller; the upper plumage decidedly paler and more blended; the black markings on scapulars, etc., much reduced, sometimes barely enlarged centrally. Length (skins) 182 (7.17); wing 133.8 (5.27); tail 80.2 (3.16).

Remarks.—This form, disallowed by Ridgway, appears to be clearly established by a series of specimens obtained by Grinnell in the Colorado River Valley in the spring of 1910. Although typical *nuttalli* was also present at the same time, Mr. Grinnell decided, upon dissection, that the resident breeding form was *nitidus*, and that *nuttalli* was a winter visitant only.

Range of *P. n. nitidus.*—Breeding from western Kansas south to Coahuila and west to southeastern Colorado, Lower California east of the central mountains, and in the Cape San Lucas region. Resident in the southern portion of its range.

Distribution in California.—Resident in the Colorado River valley and on the Lower Sonoran deserts of southeastern California.

Authorities.—**Brewster,** Auk, vol. iv., 1887, p. 147 (orig. desc.; Nueces River, Texas); *Bendire*, Life Hist. N. Am. Birds, vol. ii., 1895, p. 157 (Death Valley); *Bishop*, Condor, vol. vii., 1905, p. 142 (Witch Creek, San Diego Co.); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 139 (Colo. Valley, occurrence, meas., crit.).

No. 207b Dusky Poorwill

A. O. U. No. 418b. **Phalænoptilus nuttalli californicus** Ridgway.

Synonym.—California Poorwill.

Description.—*Adult:* Similar to *P. n. nuttalli*, but darker; the black markings of scapulars, etc., larger; the black bars of underparts broader, the dusky element in

Nuttall's Poorwill

About ½ life size

Allan Brooks

mottling strengthened on back and wing-coverts; the ochraceous element a little more pronounced throughout. Measurements about as in preceding.

Range of *P. n. californicus* (chiefly within California).—Breeds in the Upper Sonoran and Lower Transition zones in California west of the Sierras, from about Latitude 40 south to northwestern Lower California and the San Pedro Martir Mountains. Resident in the southern portion of its range and irregularly north at least to San Benito County (Paicines, Mailliard). Migrant on the Santa Barbara Islands.

Authorities.—Baird (*Antrostomus nuttalli*), Rep. Stanbury's Surv. Great Salt Lake, 1852, p. 327, part (Calif.); *Ridgway*, Man. N. Am. Birds, 1887, p. 588, footnote (orig. desc.); *Bendire*, Life Hist. N. Am. Birds, vol. ii., 1895, p. 158; *J. Mailliard*, Condor, vol. xi., 1909, p. 45, fig. (habits, nest, eggs; Marin Co.); *van Rossem and Bowles*, Condor, vol. xxii., 1920, p. 61, fig. (desc. nest and eggs; Los Angeles Co.).

Taken near Palm Springs *Photo by the Author*

CHOLLA CACTUS AT DESERT BASE OF SAN JACINTO MOUNTAINS
A HAUNT OF THE DUSKY POORWILL

THE SUN has set and the last chore is done, all save carrying in the brimful pail of milk, which slowly yields tribute of escaping bubbles to the evening air. Sukey, with a vast sigh of relief, has sunk upon the ground, where, after summoning a consoling cud, she regards her master wonderingly. But the farmer boy is loth to quit the scene and to exchange the

witching twilight for the homely glare of the waiting kerosene; so he lingers on his milk-stool watching the fading light in the western sky and dreaming, as only a boy can dream, of days which are yet to be. Every sense is lulled to rest, and the spirit comes forth to explore the lands beyond the hills, to conquer cities, discover poles, or scale the heights of heaven, when suddenly out of the stillness comes the plaintive cry of the Poor-will, *Poor-will, poor-will.* It is not a disturbing note, but rather the authentic voice of silence, the yearning of the bordering wilderness made vocal in appeal to the romantic spirit of youth. *Poor Will! Poor Will!* you think upon cities, actions, achievements; think rather upon solitude, upon quietness, upon lonely devotions. Come, oh, come to the wilderness, to the mystic, silent, fateful wastes! And ever after, even though duty call him to the city, to the stupid, stifling, roaring (and glorious) city, the voice of the Poor-will has wrought its work within the heart of the exiled farmer boy, and he owns a reverence for the silent places, a loyalty of affection for the wilderness, which not all the enforced subservience of things which creak or blare or shriek may fully efface.

The Poor-will spends the day sleeping on the ground under the shelter of a sage-bush, or close beside some lichen-covered rock, to which its intricate pattern of plumage marvelously assimilates. When startled, by day, the bird emits a mellow *quirp, quirp* of protest, flits a few yards over the sage-tops and plumps down at haphazard. If it chances to settle in the full sunlight, it appears to be blinded and may allow a close approach; but if in the shade, one is not likely to surprise it again. Even after nightfall these fairy moth-catchers are much more terrestrial in their habits than are the Nighthawks. They alight upon the ground upon the slightest pretext and, indeed, appear most frequently to attain their object by leaping up at passing insects. They are more strictly nocturnal in habit, also, than the Night-jars, and we know of their later movements only through the intermittent exercise of song. Heard in some starlit canyon, the passing of a Poor-will in full cry is an indescribable experience, producing feelings somewhere between pleasure and fear,—pleasure in the delightful melancholy of the notes heard in the dim distance, but something akin to terror at the near approach and thrilling climax of the portentous sounds.

Poor-wills are creatures of habit, and form very strong local attachments. Mr. Mailliard tells of a bird, at Hunter's Camp, on the Rancho San Geronimo, which tuned up regularly at eight o'clock in the evening, insomuch that when on one occasion the camp time-piece had stopped, the Hunters served supper by the Poor-will's call. Scientific veracity counsels me to add that the bird, sensing, no doubt, the humor of the thing,

rang the bell ten minutes early,—a most forgivable offense. At our Goose Lake Camp in 1912, we were serenaded nightly by a pair of these birds which were wont to spend the slumberous hours of daylight on a jasper-strewn hillside hard by. Several times we got so near to a performer that we heard a third note, a low, cutting sound, not unlike the bite of a whiplash. *Poor-will-hip Poor-will-(wh)ip.* At the conclusion of one performance the bird dropped his voice and repeated the notes with exceeding rapidity, as though he were trying to finish off his stent in a single breath. The official *poor-will* overture of the nightly operetta sometimes took place in an opening right in front of our tent. On one such occasion the bird, presumably the male, took a station on top of a post and urged his suit loudly, while his mate sat on the ground below. At the conclusion of an impassioned address, the serenader made an amatory dive at his enamorata, an overture which she deftly avoided. Then the wooer poured out his soul from another post and tried another dash; whereupon both birds set out happily together, the female in the lead, and reëchoing the male's notes so distinctly that I am quite inclined to believe she is capable of crying *Poor-will-(wh)ip* herself.

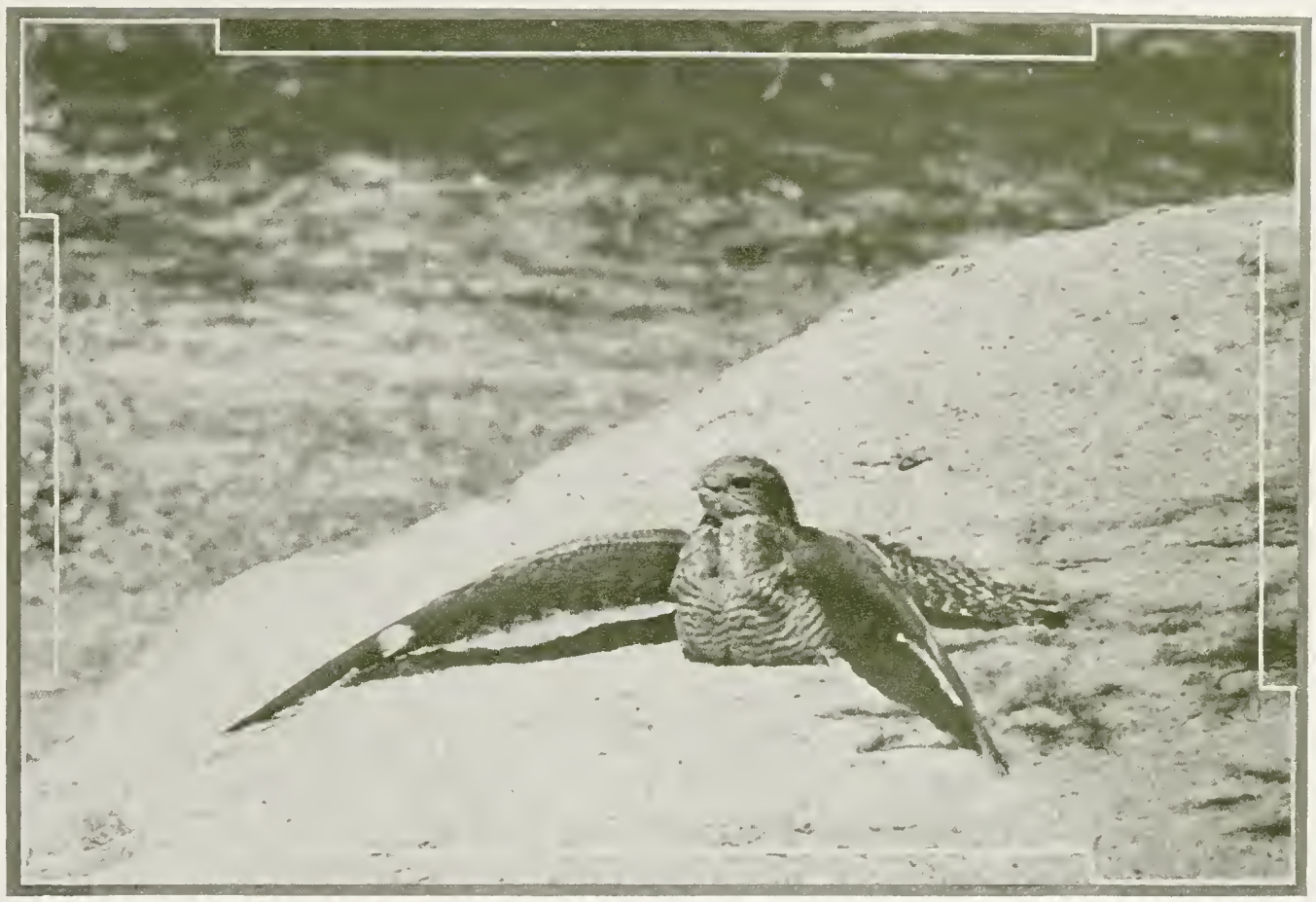
Photo by Wright M. Pierce

DUSKY POORWILL, INCUBATING
DESERT SLOPE OF THE SAN BERNARDINO MOUNTAINS

Taken in the hand, one sees what a quiet, inoffensive fay the Poor-will is, all feathers and itself a mere featherweight. The silken sheen and delicate tracery of the frost-work upon the plumage it were hopeless to describe. It is as though some fairy snowball had struck the bird full on the forehead, and from thence gone shivering, with ever lessening traces, all over the upperparts. Or, perhaps, to allow another fancy, the dust of the innumerable moth-millers, with which the bird is always wrestling, gets powdered over its garments. The large bristles which line the upper mandible, and which increase the catching capacity of the extensive gape by half, are seen to be really modified feathers, and not hairs, as might be supposed, for in younger specimens they are protected by little horny basal sheaths. With this equipment, and wings, our gentle hero easily becomes the envy of mere human entomologists.

Taken in the Ojai *Photo by Donald R. Dickey*

EGGS OF DUSKY POORWILL, IN SITU



Taken at Big Bear Lake *Photo by W. M. Pierce*

THE OFFERING

PACIFIC NIGHTHAWK DECOYING FROM NEST

No. 208

Pacific Nighthawk

A. O. U. No. 420d. **Chordeiles minor hesperis** Grinnell.

Synonym.—BULL-BAT.

Description.—*Adult male:* Mottled, black, gray, and ochraceous, and with white in patches; above, black predominating, especially on crown and back, mottling falling into indistinct bars on upper tail-coverts and tail; a touch of white on edge of wing in front of alula; the wing-quills dusky, the first primary usually exceeding or at least equal to the second; a large white transverse patch just within the basal half on the first five or six primaries (merely indicated on the outer web of the first) and opposite the tip of the eighth; a large inverted V-shaped throat-patch white; the chest, in sharp contrast, chiefly black with a few tawny tips; remaining underparts distinctly and finely barred, dusky and whitish with some faint ochraceous; the crissum pure white, usually barred at greater intervals than on breast; tail notched for half an inch

or so; a white band crossing tail near tip, except on central feathers. Bill without evident bristles, the horny part very small, but length of gape about an inch. Tarsus very short, the middle claw enlarged, and with a curious, horny, comb-like process on the inner edge. *Adult female:* Similar but without white band on tail, and with white patch on primaries often much reduced; throat-patch tinged with ochraceous, and suffusion of underparts by this color more pronounced, especially on crissum. *Immature:* More finely and heavily mottled than adults, and with upperparts more heavily marked, or even suffused with ochraceous buff. Length 228.6-254 (9.00-10.00); wing 200 (7.88); tail 112.9 (4.44); exposed culmen 7 (.276). Females a little smaller.

Recognition Marks.—To appearance "little hawk" size—really smaller. Central white spot in long wing distinctive from all but *C. acutipennis texensis*, from which it requires further careful distinction. The wing of *minor* is not less "acute" but more so; but the bird is larger, blacker above, less ochraceous below; the white spot is larger, and not so near end of wing; flies higher; *mizard* (or *bayard*) notes distinctive.

Nesting.—*Eggs:* 2; deposited on the bare ground, often among rocks, sometimes upon a flat rock, or on the gravel roof of a tall building; grayish white or dull olive-buff, finely and uniformly spotted or speckled (rarely mottled or clouded) with various shades of olive, and brownish- or purplish-gray. Av. size 30 x 21.8 (1.18 x .86). *Season:* June; one brood.

Range of *Chordeiles minor.*—North America; in winter migrating through the West Indies and Central America to Argentina.

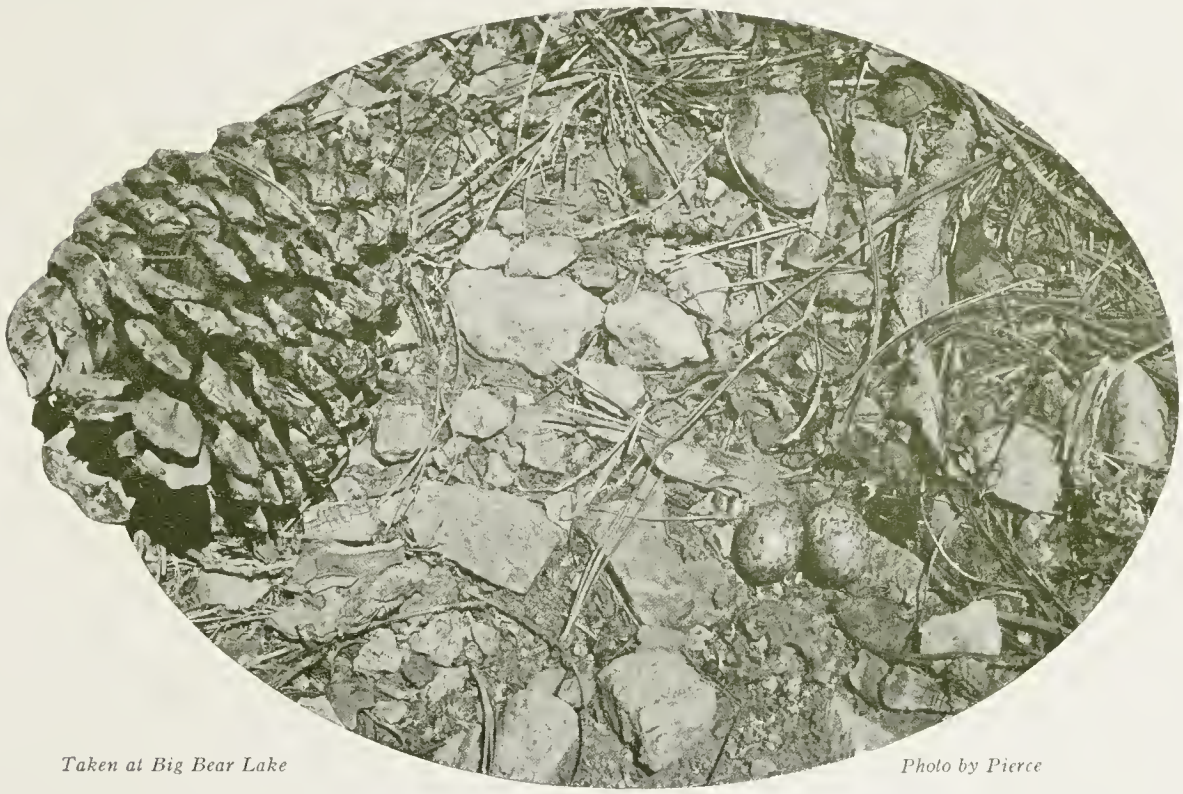
Range of *C. m. hesperis.*—The Pacific Coast district and the Sierro-Cascade system, breeding from southwestern British Columbia south coastally to Humboldt Bay, and Sierra-wise south to the San Bernardino Mountains. Winter home unknown (the form being somatically almost indistinguishable from *typicus*).

Distribution in California.—Summer resident in high Transition and Boreal zones in northern California from the Warners to the Coast, and south through the Sierras and adjacent highlands to Tulare County. Also in the San Bernardino Mountains. Probably also on the summits of the higher desert ranges north of Death Valley. Scattering appearances during migrations.

Authorities.—**Heermann** (*Chordeiles virginianus*), Jour. Acad. Nat. Sci. Phila., ser. 2, ii., 1853, p. 261 (Calif.); *Grinnell*, Condor, vol. vii., 1905, p. 170 (orig. desc.; type locality, Bear Lake, San Bernardino Mts.); *ibid.*, Univ. Calif. Pub. Zool., vol. v., 1908, p. 67 (San Bernardino Mts., habits, etc.); *Bryant*, Condor, vol. xv., 1913, p. 92 (food); *Oberholser*, U. S. Nat. Mus., Bull. no. 86, 1914, p. 46 (monogr.); *Pierce*, Condor, vol. xviii., 1916, p. 179, fig. (desc. and photo. of nest and eggs; San Bernardino Mts.).

THE NIGHTHAWK is the laggard among the western migrants, and it is always something of an event when his pouting notes, *bayard, bayard*, first break upon the stillness of the evening air. We crane our necks, too, to catch the first glimpse of the season—in mid-May, or later, according to altitude. The way of the Nighthawk in the air is, perhaps, the most varied, certainly the most eccentric, of any of the feathered kind. He seems such a frail thing, as he goes tottering and careening across the sky. We half expect to see him collapse, like a broken butterfly, or else get blown out of bounds. Now he minces along, like a school

girl; now he races to and fro in a frenzy; and now he glides along smoothly with the ease and stateliness of a gondola. He is a more dignified bat, graceful at times, but always a bit uncanny. But the "bull-bat" knows exactly what he is about, and he is playing the air game for the maximum of gastronomic profit.



Taken at Big Bear Lake *Photo by Pierce*

EGGS OF PACIFIC NIGHTHAWK, IN SITU

With a mouth like the opening of a butterfly net, and a stomach to match, this winged bug-hunter is one of the world's most successful entomologists. Everything with a pinched-in waist is grist to his mill—chinch bugs, squash-bugs, June-bugs, any old bugs. One Nighthawk stomach under examination gave up seventeen species of beetles at one time. Another, nineteen entire grasshoppers. Another, parts of thirty-eight. But if the bull-bat has a specialty, it is flying ants. Dr. Grinnell took a stomach which held 43 of our large-winged white ants (and of these some were still alive fifteen hours after capture); while Professor Beal took one individual whose crop was gorged with 1800 of a small variety.

Nighthawks are not so strictly nocturnal as are the Poor-wills, for they put a quite liberal construction on the word "twilight," and are

sure to avail themselves of all cloudy days. In fact, they move about at will whenever the sun slants fairly. The middle hours of the day are spent upon the ground, or if in timbered country, crouched lengthwise upon a tree limb. For the latter situation nature has devised a special apparatus in the shape of a comb-like process along the inner edge of the middle claw of each foot. The feet and legs being, for lack of other use, very weak, this pectination of the middle claw must be of material service in enabling the bird to retain its footing on a rounding surface of bark. It is in these hours of the middle siesta that the intricate color pattern of the plumage makes the bird appear—or rather disappear—to the greatest advantage against the variegated setting of bark or rock. A Nighthawk on the ground is all but invisible—and knows it.

The Nighthawk, or Goatsucker family (or order), the *Caprimulgidæ*, is chiefly of tropical or subtropical distribution. To those, therefore, who are familiar with the Chuck-will's-widow (*Antrostomus carolinensis*) and Whip-poor-will (*A. vociferus*) of the southeast, or even with the eastern Nighthawk (*C. m. minor*), it comes as a surprise to learn that our bird is Transitional, or even Boreal in its Californian range. I know I was

Taken at Big Bear Lake *Photo by Pierce*

AN UNUSUAL TYPE

startled to see it on July 5, 1911, charging about over the melting snow-banks at the Cottonwood Lakes (elevation 11,000 feet); though it seems I *should* have been more surprised to find it on the 19th of June at Lone Pine, where the Texas Nighthawk (*C. acutipennis texensis*) is supposed to reign supreme. In the latter instance, it is fair to suppose that the bird had only descended temporarily from the Sierran heights which command Owens Valley. Mrs. Bailey[1] once found a nest on the crest of the Sierra Nevada Range, above Donner Lake. The Pacific Nighthawk is a common breeding bird in the San Bernardino Range, and Dr. Grinnell took eggs at an altitude of 9000 feet on San Gorgonio Peak; though, singularly enough, the species is wanting in the San Jacinto Range, of almost equal elevation, immediately to the south.

While not at any time strictly gregarious, favorable conditions are likely to attract considerable numbers of Nighthawks to a given spot. I have seen dozens of birds at a time winging noiselessly to and fro over the tranquil waters of an inland lake, and on several occasions companies of from one to two hundred executing some grand march, or aerial parade, over a well-watered pasture. These convocations are not necessarily preliminary to the autumnal movement, for I once saw such an assemblage at Goose Lake, in Modoc County, on the 23rd of June (1912). It had snowed the day before, so possibly these birds had been driven in from the hills to a place of assured sustenance, much as Swallows are driven to the ponds in early spring. During migration, too, scores of these birds may sometimes be seen moving aloft in loose array, and customarily, at this season, silent.

The feature of Nighthawk life which chiefly endears him to the popular regard is the courting flight of the male. After much preliminary shifting and many emphatic *bayards* he suddenly casts himself headlong down the air in a great parabola of flight. As he turns sharply and at break-neck speed, he produces a loud booming *daw-w*—though whether by the rushing of air through the wings or across the opened mouth will, perhaps, never be determined.

The eggs of the Nighthawk are heavily mottled with slaty and other tints, which render them practically invisible to the searching eye, even though they rest upon the bare ground or, as oftener, upon an exposed and lichen-covered rock ledge. Except during the very warmest hours (when the sun's rays might addle them) and the coolest(when they might become chilled), the sitting bird is likely to rest beside her eggs instead of on them. The young birds when hatched place great reliance upon their protective coloration, and even permit the fondling of the hand rather than confess the defect of their fancied security. The old bird, meanwhile, has flut-

[1] cf. Bird Lore, Vol. V., March, 1903, pp. 43-45

tered away over the ground with uncertain wing and drooping tail to drop at last on the very point of death. Or failing in this ruse, she is charging about in midair with plaintive cries. Look upon the babies for the last time, for they will be spirited away before your return,—borne off, it is said, between the thighs of the parent bird.

No. 209

Texas Nighthawk

A. O. U. No. 421. **Chordeiles acutipennis texensis** Lawrence.

Synonyms.—Formerly called TEXAN NIGHTHAWK. BULL-BAT. MOSQUITO HAWK.

Description.—Somewhat similar in general appearance and color-pattern to preceding species. *Adult male:* Above and on breast finely mottled black, whitish, dusky, and ochraceous; throat white, chest whitish, almost entirely overlaid with ochraceous tips; remaining underparts, including crissum, chiefly ochraceous, finely barred with black and some white centrally; white patch on wing lying well outside of middle point between tips of seventh and fifth primaries, and involving first four primaries only; the first primary usually falling short of the second (hence, notably more rounded instead of more acute than *C. minor*); tail somewhat emarginate and crossed by subterminal white band, as before, the basal portion more distinctly blackish-and-ochraceous-barred. Bill dusky; legs and feet brownish, claws black, the pectination on inner edge of middle claw reduced, light brown; iris dark brown. *Adult female:* Similar to male, but without white band on tail; the patch on primaries reduced, pale cinnamon or tawny; the throat patch reduced and margined by ochraceous, or else entirely pale tawny. *Young birds:* Body plumage entirely pale ochraceous, spotted finely but sparingly with dusky. Length 203.2-241.3 (8.00-9.50); wing 183 (7.21); tail 111.5 (4.39); exposed culmen 6 (.236); tarsus 14 (.55). Females slightly smaller.

Recognition Marks.—Towhee size, but appearing larger; white spot *beyond* middle of wing; smaller, lighter, and more ochraceous than *C. minor hesperis.*

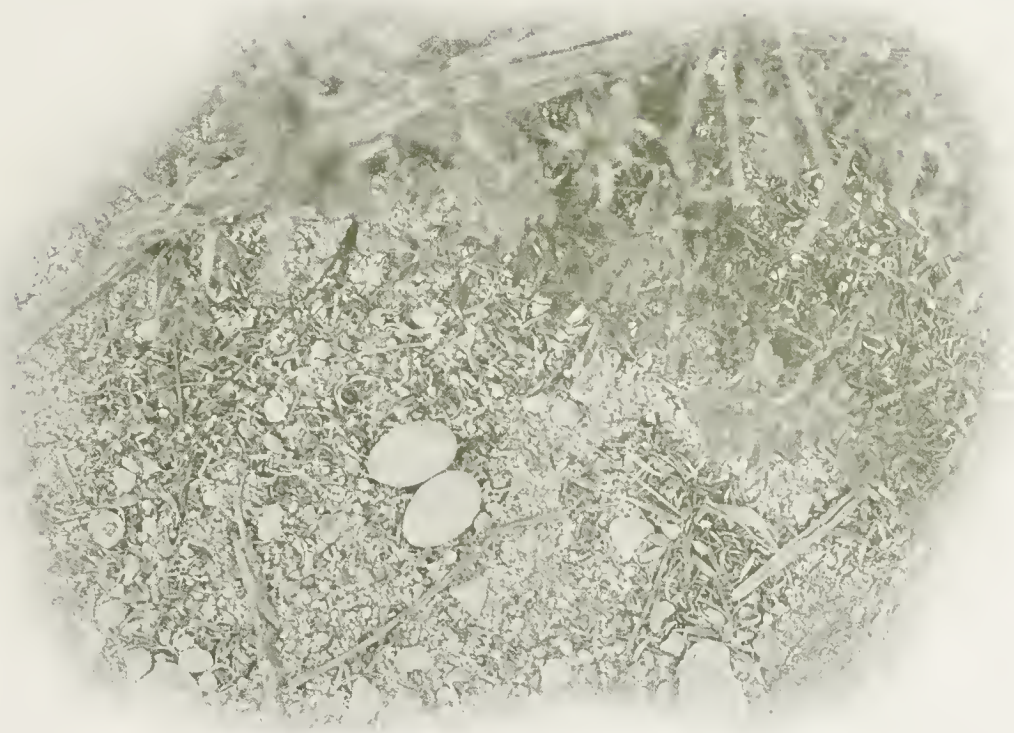
Nesting.—*Eggs:* 2; oval or elliptical-ovate; laid on bare ground, sand, or gravel of desert; dull white, rarely pale olive buffy or greenish, finely speckled (sometimes absolutely) with dark olive, dark grayish olive, and violet-gray, rarely sharp-spotted with olivaceous black and grayish olive. Av. size 26.8 x 19.6 (1.06 x .77). *Season:* May—June; Shandon, San Luis Obispo County, April 17, 1916.

Range of *Chordeiles acutipennis.*—Southwestern United States from southern Utah south through the greater portion of South America.

Range of *C. a. texensis.*—Breeds in Lower Sonoran zone, from central California, southern Nevada, southern Utah, and southern Texas, south to southern Mexico and Cape San Lucas; winters south to Panama.

Distribution in California.—Common summer resident in Lower Sonoran zone practically throughout the southern half of California. On the east side of the Sierras, north to Bishop; on the west, north to Stanislaus County, Glenn County, and (perhaps casually) Ukiah, Mendocino County. One winter record, Long Beach, Jan. 31, 1911.

Authorities.—**Baird** (*Chordeiles texensis*), Rep. Pac. R. R. Surv., vol. ix., 1858, p. 154 (Colo. R., Calif.); *Bendire*, Life Hist. N. Am. Birds, vol. ii., 1895, p. 172, pl. iii., figs. 7-10 (eggs); *Taylor*, Condor, vol. xiv., 1912, p. 222, fig. (Winslow, Glenn Co.; breeding); *Oberholser*, U. S. Nat. Mus., Bull. no. 86, 1914, p. 103 (monogr.); *Swarth*, Birds of the Papago Saguaro Nat. Mon., 1920, p. 38 (courting "song," habits, etc.).



Taken in San Fernando Valley *Photo by the Author*

EGGS OF TEXAS NIGHTHAWK, IN SITU

THE NATURE loving pilgrim camping for a night in some desert wash will have occasion to wonder at a strange burring croak which wells up out of the ground, apparently from nowhere in particular. It is a weird sound, low, monotonous, and impersonal,—drowsy, too, if one can ignore the challenge of its mystery. It is the voice of a giant frog grown weary in a waterless land. Or it is the voice of the desert itself murmuring its gratitude before the cooling touch of nightfall. Pan wakes at this hour in yonder mountain glade and summons all his satyrs to revel, but here in the desert silence reigns, silence and the sole mystery of sound. The traveler sleeps, and rousing midway of his dreams, he seems to hear two voices, two deserts answering from nowhere. But each utters the self-same silence, bidding him resign again to slumber.

The most gifted imagination would scarcely ascribe this geophonic serenade to a pair of birds. But the Texas Nighthawks are responsible, as any one may learn who has the fortune to stumble upon their eggs at nightfall. The hour is important, for were the brooding bird to be disturbed in broad daylight she would merely lift over the sage-brush, flit a few yards, plump down again, and that would be the last of it. But at dusk there is more activity. The bird retires, indeed, but she summons her mate and they set up, at near ranges, always from the ground, that quaint batrachian wail, which is intended, no doubt, rather to charm than to frighten. Heard at close quarters, the note is again seen to be well sustained and nearly continuous, save that it breaks now and then to a lower note, apparently while the bird is taking breath. (This sound can be passably imitated, I find, by attempting an "Italian A" low and soft with the uvula half shut instead of wide open.) But the serenaders are ill at ease now. The sound changes abruptly to a staccato complaint, an excited clucking, breathlessly interspersed with more musical notes: *toot toot toot oo ănk ah toot toot ah wănk ah toot toot toot oo toot.* Both birds utter these notes, and as they rise and flit restlessly to and fro, or make suggestive passes at the intruder's head, they sound like flying banjos picked by unseen fingers. How unclassifiable these notes really are may be guessed from the varied attempts at description already

Taken in Merced County THE NESTLINGS *Photo by the Author*

Taken in Merced County *Photo by the Author*

PROTECTIVE COLORATION
ONLY THE TELL-TALE EYE REMAINS TO GIVE THE CHICK AWAY

recorded. One observer speaks of the bird's "mewing," another of its "humming," and a third likens the terrestrial serenade song to "the distant and very rapid tapping of a large woodpecker."

Texas Nighthawks bear a close superficial resemblance to the more widely known *Chordeiles minor*, and their appearance a-wing is not particularly different. They are, however, less active and, above all, less venturesome on the wing. They do not favor high levels of air nor attempt the aërial stunts of *minor*, but they flit about modestly over the sage tops, or else leap up off the ground at their winged prey. Texas Nighthawks are also quite sociable, especially toward the close of the breeding season, and hundreds may sometimes be seen in favored valleys, or over such bodies of water as abound in insects. While nesting may be conducted at any remove from water, it is probable that the birds make daily visits to water-holes, and drink "hen-fashion," or else dip on the wing from some of the larger surfaces. Though they endure the extreme heat of the desert, they cannot be quite insensible to it, for they retire to Transition levels with the advancing season. The highest altitude of

recorded occurrence is perhaps that of Sugarloaf in the San Bernardinos, where Grinnell found them on August 20th, at 7500 feet.

It is doubtless improper to speak of the "nesting" of the Texas Nighthawk. Nest she has none, but her two eggs are laid upon the bare ground, and this almost of necessity is of some complexion of sand. The parched spaces between creosote bushes, where the particles of soil,

Taken near San Diego *Photo by Donald R. Dickey*

MR. DICKEY TAKES ADVANTAGE OF THE SHADOWS

although fine, are still so hot that they hate each other, are one type of bottom. The coarse granitic sand poured out of Tujunga Canyon by the winter freshets is another. The gravel beds of the desert ranges whose component pebbles are sered by volcanic acids are a third. If the eggs have any cover at all, it is the accidental shade of some scraggly bush, and when uncovered they are the very color of the ground. Or, to be exact, their ground-color is dull white or pale grayish white, rarely greenish or pinkish gray. The markings, of olive or bister, are finely comminuted (4800 pigment strokes to the square inch in one specimen in my collection), or, rarely, coarsely and sparingly spotted; still more rarely, marks are altogether wanting.

Although so careless of her eggs at first, the bird's attachment grows as incubation advances. So devoted does she become that she will suffer the intruder at three or four feet, and has even been taken by the hand. The assertion that the Texas Nighthawk does not employ the decoy ruse is incorrect, for when the chicks are hatched the mother will flutter away enticingly, like any other ground-nesting species. The young birds are much lighter in coloration than the parent, being assimilated, apparently, to the stronger lighting which prevails in summer. A baby Texas, squatting motionless in a naked stretch of alkali, is the acme of invisibility, for its warm silvery tints exhibit the very sheen of the impregnated earth. Two crops of babies are due in one season, and nesting ranges from the middle of April to the first week in August.

Oberholser, in his Monograph of the genus *Chordeiles*, gives April as the month of arrival for this species "in the southwestern United States," with an exceptional record of March 21st, and others in the middle of May. Our records would indicate that arrival during the last week in March is at least not exceptional. Dr. Grinnell saw one individual at Chemehuevis on March 9th, 1910, but did not observe another in the Lower Colorado Valley until March 27th. I saw a single bird at Long Beach on the evening of January 30th, 1911, and Mr. C. B. Linton, who was with me, agreed that it could be none other than this species. The return movement sets in in September, but October records are not rare.

The name *acutipennis* is, of course, most unfortunate, for the wing of *C. a. texensis* is not as "acute" as that of *C. m. hesperis*. While the relative length of the outer primaries is variable in both species, the outermost is longer than the next ones (hence the wing more pointed) in 85 percent of the cases in *C. minor;* while it is shorter (with the tip of the wing definitely rounded) in 75 per cent of the examples of *C. acutipennis*. Endless confusion, therefore, exists in all sight records, especially along the northern limits of this bird's range. Careful discrimination will probably show that *texensis* is gradually extending its range northward, and it may be expected to appear in time as far north as Red Bluff or Redding.

No. 210

American Barn Owl

A. O. U. No. 365. **Tyto perlata pratincola** (Bonaparte).

Synonyms.—Monkey-faced Owl. Tawny Owl. White Owl.

Description.—*Adult in medium plumage:* General color-tone ochraceous tawny (above) and ochraceous buff (below); upperparts ochraceous tawny basally and in broad irregularly irruptive edgings, overlaid with finely mottled ashy gray and dusky; the tail crossed by four or five bars of dusky, the wing quills similarly marked, or else with alternating half-bars, the inner webs changing to white; underparts ochraceous buff or pale tawny, irregularly mingled with white, and marked sparingly and diffusely with rounded or wedge-shaped spots of blackish; facial disc of feathers having a peculiarly loose, open, but stiff texture, white, but variously stained with reddish brown, purplish brown, or claret, the characteristic color concentrated in solid spot in front of eye; the "rim" of close-set, shortened feathers colored like back and eye-spot (hence epitomizing the individual tone of the specimen in hand). Bill light-colored or horny-stained, claws dark horn. *Dark extreme:* Underparts dark ochraceous tawny; color of facial disc correspondingly intensified; dusky of upperparts stronger, or not. *Light extreme:* Upperparts chiefly ochraceous buff, the dusky mottling much reduced in area and intensity; underparts pure white or barely touched with buffy, the dusky spots smaller, reduced in number, or wanting; facial disc without stain; eye-spot lighter brown. *Remark:* These variations, sometimes referred to as "phases," are held by most authorities to be independent of age or sex; but Ridgway says in a footnote: "Apparently, however, females *average* darker than males." This suggestion receives striking confirmation from a series of 25 specimens in the Berkeley museum, where the darkest specimens, four in number, are all females; and the white birds, six in number, are without exception males. Moreover, the intergradation is so perfect as to suggest that females are progressively darker and males progressively lighter with age. *Downy young* are pure white, and have strikingly elongated faces, suggesting the primitive character of this group of owls. Length of adult males: 355.6-406.4 (14.00-16.00); wing 328.6 (12.94); tail 138.1 (5.44); culmen from cere 22.1 (.87); tarsus 73.3 (2.88). Females average a little larger.

Recognition Marks.—Crow size; tawny or white coloration; rostrum (the beak with its bony support) elongated; facial disc, therefore, triangular, or heart-shaped.

Nesting.—*Nest:* A cranny in cliff or building, or burrow in bank, or natural cavity in tree; unlined, save occasionally by hair and bones cast up by bird. *Eggs:* 4 to 9, rarely 10 or 11 (24 of record); white, lusterless, ovate, short-ovate, or rarely elongate, very variable as to length. Av. of 34 California-taken specimens in the M. C. O. colls.: 42.4 x 32 (1.67 x 1.26); index 75. *Season:* March–June; January to September of record; one or two broods.

Range of *Tyto perlata.*—North and Middle America.

Range of *T. p. pratincola.*—North America, breeding from about Latitude 40 or 42, south to southern Mexico, and casually north to the northern tier of states.

Distribution in California.—Resident in Lower and Upper Sonoran life zones practically throughout the State. Northernmost record on the coast, Trinidad, Humboldt County, June 17, 1916. Also found sparingly upon the Channel Islands.

American Barn Owl

About ½ life size

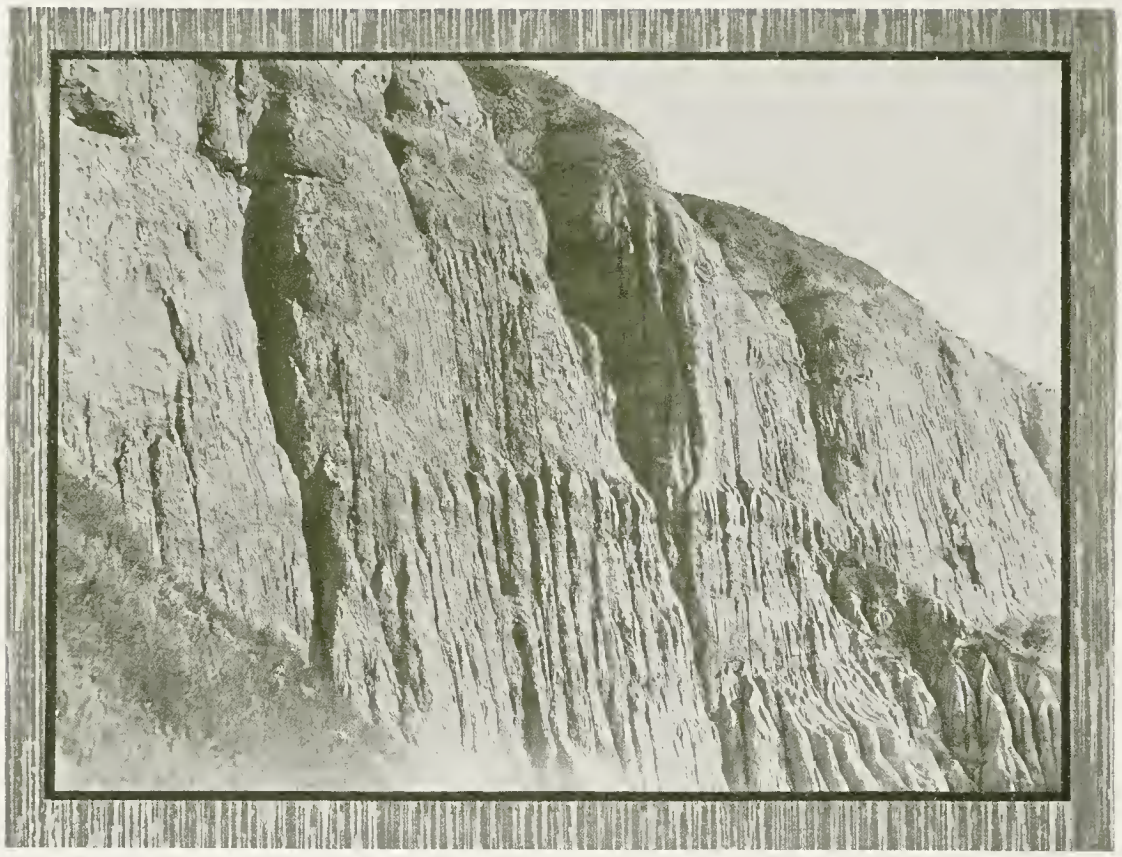
Authorities.—Gambel (*Strix pratincola*), Proc. Acad. Nat. Sci. Phila., vol. iii., 1846, p. 47 (Calif.); Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1847, p. 28 (Calif.; distr. syn., habits, etc.); *Fisher*, Hawks and Owls of the U. S., 1893, p. 132, pl. 19 (food); *Miller*, Condor, vol. xii., 1910, p. 12 (fossil); *Tyler*, Condor, vol. xvii, 1915, p. 57 (San Joaquin Valley; nest, food, habits, etc.).

IF ABILITY and worth are to count for anything, the Barn Owl, and not the Moon, ought to be the Queen of the Night. Whoever thought of calling the blear-eyed old man in the moon a "queen" anyhow? Not to mention the mistake in sex, his derelictions are notorious. He is off the job half the time, though he manages to keep the world in the dark as to his misdoings *in absentia*. He is an inveterate tippler,—that we know. I have myself seen him "take a horn"—two of them, in fact. And that he goes on a spree and gets full every month is the scandal of the heavens. He rises at irregular hours, and for days after the big debauch his friend Phoebus has to help him to bed. Away with this tradition of moonly virtues!

Taken in San Bernardino County *Photo by Pierce*

THE SIESTA

NOTE GRADATION IN SIZE OF THESE INFANTS



Taken in San Luis Obispo County *Photo by the Author*

A 'DOBE NESTING CLIFF

But consider, I pray, the merits of the Barn Owl. She is on duty 365 nights in the year. Rising punctually when the sun is well set, she sallies forth to review and regulate her realm with tireless diligence. Softer than silk, or than any similitude, are her aërial floatings. All gentle things trust her, and none save mischief-makers have aught to fear from her gentle sway.

As for her beauty, who may say that in her robes of white, overlaid with filmiest laces of the dusk and set out with burnishings of ochraceous gold, she is not, indeed, the fairest of night birds, and entitled as such to unbroken rule? Though the populace hoots, as it always has, when confronted with claims which it does not understand, and dishonors this gentle bird with such a vulgar name as "Monkey-faced Owl," on those occasions, fortunately rare, when our heroine is dragged forth into the disabling light of day, we insist that this is Beauty's self, and Aphrodite's double, appointed for the rulership of Night.

But when the "Night-bird" sings—ah, there is pause, food for meditation and regret. For, like the lordly peacock, bird of Juno, the Barn Owl

has been saddled with a most unmelodious voice. She does not know it, poor thing, and fills the night, therefore, with screeches which seem the very soul of petulance or hate. This challenge note of the Barn Owl is harsh beyond all expression, a snarling *churr*, ground out between clenched teeth. I do not know where Lewis Carroll thinks he got the name for his impossible animal, the "*Snark*"; but I suggest that it came subconsciously from the Barn Owl's cry, *snarrk*. By this sound we know that the Barn Owl is abroad, and by the sustained succession of these sounds, we judge that the Barn Owl spends more time a-wing than do any of the Strigine owls. *Aluco*[1] is a tireless quester, the buzzard of the night, pausing only, and that very frequently, when its prey is spotted on the ground. The function of the *snarrk* cry is not exactly known, although the birds do hunt more or less in pairs, and may wish to keep in touch, however distantly. It is more probable, however, that *snark* is a joy cry, and expresses the bird's delight in the prospects of the chase, or its exultation over life lived under the tipsy beams of the swelling moon.

Taken near Escondido *Photo by J. B. Dixon*

NEST AND EGGS OF AMERICAN BARN OWL

In the springtime this joy of life, or else the passion of love, urges the Barn Owl to more extended effort. Fluttering his wings softly, with head uplifted, and as it were, dancing in midair, the bird says *crick crick crick crick crick crick crick*, in a sort of ecstatic chant. Or again, the note is doubled, *witta witta witta*, in breathless cadence, while the bird drifts slowly about with no other thought, apparently, than to maintain

[1] Formerly so called.

himself aloft and voice his uttermost passion to the stars. Both of these performances are likely to occur in perfection immediately after the Owl has left the cramped quarters of his diurnal retreat, and he sees the toothsome field mice stretched out before him in unending vistas. These characterizations, I dare say, are partly local, and they may differ entirely from experiences in the East or in the Old World. I am very sure, for example, that the cries of birds heard in the summer of 1918 in northern Nevada were lighter, sharper, and clearer in quality than those to be heard in southern California. The Nevada birds, moreover, have a much more considerable repertory.

The Barn Owl is the most strictly nocturnal of all owls; that is to say, it "rises" later, and "sets" earlier, usually a good half hour before sunrise. It occupies by day, also, the darkest of available retreats; but the birds are so abundant and so well distributed that they must avail themselves of a great variety of hiding places. Buildings are in good demand, barns, attics, vine-covered porches, tank-houses, towers and belfries. Niches and tiny grottoes in the cliffs are sure of attracting Barn Owls, no matter

Taken in San Bernardino County
Photo by Pierce

WHA' Z'ASH YOU SAY?

EVEN BABY OWLS SOMETIMES IMBIBE TOO MUCH MOONSHINE

what their outlook, provided only that the local accommodations are convenient. For this reason *Tyto* occasionally figures as a seabird. Certain favored cliffs of sandstone in the inner coast ranges fairly swarm with Barn Owls, and their presence may be known by the generous smears of "whitewash" which decorate the skirts of long frequented ledges. Next after cliffs come the steep-walled barrancas, those sharp-cut discharge-pipes which gash our alluvial fans, or pursue a somber course to the sea. Here, and along the banks of rivers, the Barn Owls rest and doze "in quantities." They are able to dig their own retreats, generous tunnels driven to a depth of three or four feet, and under such circumstances are unmolested by that tyrant of the cliffs, the Prairie Falcon. Even here there is danger at flood time. A friend's friend, who happened to be near the San Juan River (in San Luis Obispo County) when the stream was on the rampage, heard a muffled crash, and looking up, saw a frantic Barn Owl emerge from a tunnel, whose innermost recess had been barely spared by the caving bank. Several other birds, to the observer's belief, were carried down helpless by neighboring disasters.

Taken in San Diego County *Photo by Dickey*

A LANGUID PRETENSE OF DECOYING

In default of more stately quarters the birds will also seek hollows in trees, while in many regions they have to comfort themselves, for roosting at least, with nothing better than thick foliage. Now and then I have startled Barn Owls from the innermost depths of Phoenix palms, and I have no doubt that our native palms of the desert (*Washingtonia filifera*) harbor their quota.

Of course the nesting places are in part identical with the roosting places. The first token of occupation, present or past, is the flamboyant

whitewash,—excrement wherein the calcium of unassimilated bone-stuffs figures predominantly. But the second token, the refuse heap, is more interesting and more instructive. Below or beside each nest is an accumulation, sometimes decades old, of mammal-skulls, fur, and feathers, in part rejected portions from the banqueting table, but chiefly pellets, or "casts," indigestible portions of food which are automatically ejected from the bird's crop when the edible portions have been released. Barn Owls are prodigious eaters, and it becomes important to examine their table and their garbage can, both qualitatively and quantitatively. As to quantity, I have seen dumps which contained not less than three bushels of material, with hundreds of skulls apparent on a superficial examination. Not even this represents the original mass, for in the older of the Aluconine kitchen middens, the lower strata have disintegrated and settled. The Barn Owl's table, too, is always set. The youngsters are not only fed diligently all night, but a generous store is laid by for daylight lunches. The poor dears are sure to need a "piece," you know! Thus, Fred Truesdale found six mice, three rats, and two gophers in a nest containing seven young. Tyler, of Fresno, found a nest containing four very small birds and six eggs, for which the following provision had been made: five Pocket Gophers (*Thomomys*),

Taken in San Bernardino County *Photo by Wright M. Pierce*

A WELL EARNED VIEW

Portrait of Young Barn Owl

From a photograph by Donald R. Dickey

Taken near Lakeside

five Kangaroo Rats (*Perodipus*), one Pocket Mouse (*Perognathus*), and two White-footed Mice (*Peromyscus*). And Finley has said:[1] "An old Owl will capture as much or more food than a dozen cats in a night. The owlets are always hungry; they will eat their own weight in food every night and more if they could get it. A case is on record where a half-grown owl was given all the mice it could eat. It swallowed eight in rapid succession. The ninth followed all but the tail, which for some time hung out of the bird's mouth. The rapid digestion of the Raptores is shown by the fact that in three hours the little glutton was ready for a second meal and swallowed four additional mice."

With this enormous capacity for destruction it becomes of real concern for us to know just what the Barn Owl eats. Exhaustive studies have been made by Government officials, studies which prove that the Barn Owl is without peer in the economic restraint of mice, moles, shrews, rats, and gophers. In its destruction of pocket gophers alone a single Barn Owl is worth from twenty to fifty dollars per annum to the State of California. When to this is added its services in destroying meadow mice of the *Microtus* group, the bird's economic value is beyond calculation.

Regarding the Barn Owl's relations to the bird world, it has to be confessed that the smaller birds do appear occasionally upon its bill of fare. The proportion of birds found in an eastern investigation, for example, was nearly five per cent. But at that the adverse count is negligible in comparison with its overwhelming services. The Barn Owl is certainly the least destructive to bird life of all owls, and we suspect that the percentage of destruction in the West is materially less than in the East. Much may be learned in this regard from the attitude of the smaller birds. Thus, the Sparrow Hawk (*Cerchneis sparverius*), which only rarely attacks birds, goes and comes unnoticed by the smaller songsters, whereas the slightest movement of the Sharp-shinned Hawk is accompanied by a wave of apprehension. The facts regarding a night prowler are more difficult to get at, for his feathered victims are presumably asleep when the silent bolt falls. All I can say is that the accidental disturbance of a Barn Owl at midday is never attended by the hue and cry which invariably follows the course of a Horned Owl, or even a Screech Owl. The birds do not recognize *Tyto* as an enemy, if he is one. Mr. Brooks, here at Santa Barbara, saw a Burrowing Owl attack a Barn Owl sharply and put him to flight, but he was probably actuated by professional jealousy. On the other hand, I once had a pretty proof that at least one song bird does not fear the Barn Owl. The Barn Owl is nothing if not methodical. For some months past a bird in returning from the nightly hunt has passed exactly over the peak of our house, and barely clearing it,—using the point,

[1]Condor, Vol. VIII., July, 1906, p. 87.

apparently, as a landmark for his southward course. A Mockingbird this past season (1918) chose a point on the eaves immediately in line with this flight (and within eight feet of my head), for his midnight and all-night serenades. Thus, Owl and Mocker saw each other every morning; and once, under a full moon, I roused in time to see *Tyto* pass squarely over the mimic's head, and that not over six feet away. Yet the Mocker "never turned a hair," nor admitted by a catch in his voice that anything unpleasant had transpired. These birds at least understood each other.

This industrious mouser is, fortunately, both prolific and abundant. In favored sections it appears to nest twice in the season, and since sets average six or eight in number—from that up to ten!—it may be seen that Mr. and Mrs. *Tyto* are not afraid of hard work. After flushing a bird from hard-set eggs I have seen a pretty pantomime. The bird returned to a point on the ledge hard by, and, fluffing its feathers to the utmost, began to flutter and prance about, as though it were trying to stand on a hot stove-lid. But this is unusual. Ordinarily the bird leaves the nest by a downward sweep, and makes off hurriedly to hide in some remembered cranny in the near neighborhood. This is especially the case if Prairie Falcons happen to be nesting on the same cliff. The Falcon is a heartless tyrant, and in this hour of his anxiety, he rejoices in a chance to vent his spite upon an innocent Barn Owl. Only luck can save the Owl. Some I have seen smashed in midair, and others merely bowled over, to rise wrathful but silent, and scramble into cover before a second bolt should fall.

Barn Owls' eggs are notably different in shape from those of other owls, being elongate or truly oval, instead of rounded, as in the *Strigidæ*. The index is 76, as against an average of, say, 83.5 for the other group. This points strongly to an ancient separation of stock. The eggs are laid upon the bare floor of a cavity, or else upon whatever chance accumulation of disintegrated pellets, or other *incognoscenda* may offer. The place is sure to be filthy, and before the youngsters are done with it, the stench is likely to be overpowering. Eggs are deposited every other day, or irregularly; and incubation begins immediately, so that the youngsters arrive seriatim, and are most accurately graded in size. The parents try to be fair, but the youngest frequently arrives too late, for what helpless infant could hope to thrive after having been stepped on, whether purposely or no, by an eighteen-day-old brother! When intruded upon, the young family will hiss like a nest of snakes, and throw themselves in various defensive postures. The babes, in their close covering of white wool, are comical looking creatures, but they do not scruple to press home a set of claws which are sharp as needles; so perhaps it is just as well not to try to chuck them under the chin. The older birds will fight like demons

when closely pressed, and one soon comes to see what a powerful as well as alert foe the wicked gopher has to fear. Their feeding habits, also, are not fastidious. The rending of a rat carcass would be a terrifying sight if the birds were, say, a hundred times as large. The head of the victim goes down first, probably because the brains are the most delectable morsel, and the rest follows piecemeal, "hide, horns and hair." But the case is not hopeless, for punctual to the minute the skull reappears, and later the clothes of the late lamented, done up in a neat package. *Thomomys*, he of the tireless tooth, who loves our choicest vegetables and most expensive flower-bulbs, he shall have, thus, a befitting monument,—the skull and bundle. Hail, beneficent deliverer! Queen of the Night!

Taken in San Bernardino County *Photo by Wright M. Pierce*

SHAKE HANDS!

No. 211

Long-eared Owl

A. O. U. No. 366. **Asio otus wilsonianus** (Lesson).

Description.—*Adult:* Above finely mottled white and dusky, with apparently half-concealed ochraceous on subterminal margins of feathers, the design broadened on wings,—ochraceous, white, and dusky in patches; the wing-quills and tail distinctly barred—dusky with ochraceous basally, dusky with gray terminally; ear-tufts conspicuous, an inch or more in length, black centrally, with white and ochraceous edges; facial disc tawny; region about base of bill, or at least chin, white; blackish about eyes on inner sides, the edges, especially on forehead, finely mottled with black and white; tibiæ, tarsi, and feet pale tawny, immaculate; remaining underparts white, ochraceous, and dusky, in bold, free pattern, and upper breast distinctly and heavily streaked, the sides and flanks distinctly barred, the belly exhibiting a combination of the two types; lining of wing pale tawny, unmarked basally, save for a dusky patch on tips of coverts, heavily barred distally. Bill and toe-nails blackish. The folded wings exceed the tail, and the bill is nearly concealed by black and white bristles. *Nestlings:* Everywhere, except on head and lining of wings, finely barred dusky and gray or ochraceous. Length 330.2-406.4 (13.00-16.00); wing 285.8-304.8 (11.25-12.00); tail 146.1-158.8 (5.75-6.25); bill from nostril 16 (.64); tarsus 38.1-45.7 (1.50-1.80).

Recognition Marks.—Little hawk to crow size; a strongly marked and unmistakable species; the "horns" taken in connection with its size are sufficient to identify it.

Nesting.—*Nest:* Usually a deserted nest of crow, magpie, heron, etc.; sometimes in rock-rifts or even on the ground. *Eggs:* 3 to 6; subspherical, white (or not infrequently red-spotted with nest-marks). Av. size 40.6 x 32.8 (1.60 x 1.29). *Season:* February –May; one brood.

Range of *Asio otus.*—Eurasia and temperate North America.

Range of *A. o. wilsonianus.*—Temperate North America; breeding from southern Mackenzie, Quebec and Newfoundland, south to Virginia, Arkansas, northern Texas, and southern California; wintering from southern Canada, irregularly south to central Mexico.

Distribution in California.—Locally resident, chiefly in interior valleys, on the oak-covered foothills, and along wooded streams of the Upper Sonoran zone, south (at least formerly) to San Diego. Sparingly resident on the Santa Barbara Islands (Catalina and San Clemente), and an occasional invader of the higher mountains: White Mountains at 10,500 feet, May 26, 1919; San Jacinto Peak at 9000 (Grinnell and Swarth); San Bernardinos at 7000 (Willett). Numbers augmented in winter, at least in San Diego district and on the edges of the deserts (Palm Springs, Jan. 28, 1913).

Authorities.—Baird (*Otus wilsonianus*), Rep. Pac. R. R. Surv., vol. ix., 1858, p. 53 (Bodega, Calif.); *Bendire*, Life Hist. N. Am. Birds, vol. i., 1892, p. 328, pl. 12, fig. 2 (egg); *Fisher*, Hawks and Owls of the U. S., 1893, p. 140, pl. 20 (food); *Tyler*, Condor, vol. xv., 1913, p. 17 (San Joaquin Valley, desc., nest and eggs); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 58 (s. Calif. ids.).

BEING strictly nocturnal in habit, and comparatively silent so long as undisturbed, this Owl would almost pass from our ken were it not for the easy opportunities afforded by the nesting season. Although

Taken in San Luis Obispo County — *Photo by the Author*

BRISTLING IN DEFENSE

it is really fairly common throughout the state, and nests regularly in live oaks and evergreens, it is only in the neighborhood of open country, and especially along the borders of willow-lined "Sonoran" streams, that it may be studied to advantage. Here, in March or early April, one frightens the male, or "bull" Owl, from some thicket of willow limbs or cottonwood; and, if he is wise, he immediately casts about for the nearest nest, no matter how dilapidated, of Crow or Magpie. And here, above the melee of crisscross sticks, themselves like sticks, save as betrayed by the breezes, may be seen the faintly waving plumicorns of the female, sitting very close. Only those who have been there, know what a treat is in store. My first experience came on the shores of Lake Chelan. A likely looking Crow's nest, ten feet up in a willow clump, tempted inspection. Upon my approach an Owl slipped noiselessly from the nest and left me to plan the ascent through an ugly tangle of saplings. As I started in I heard the overture of a caterwauling contest, just as when Thomas remarks, "*We-a-o-o-a-ow*," and Nature catches her breath

Taken in Washington *Photo by the Author*

A NESTING SITE
MAMA LONGEARS IS ON DECK

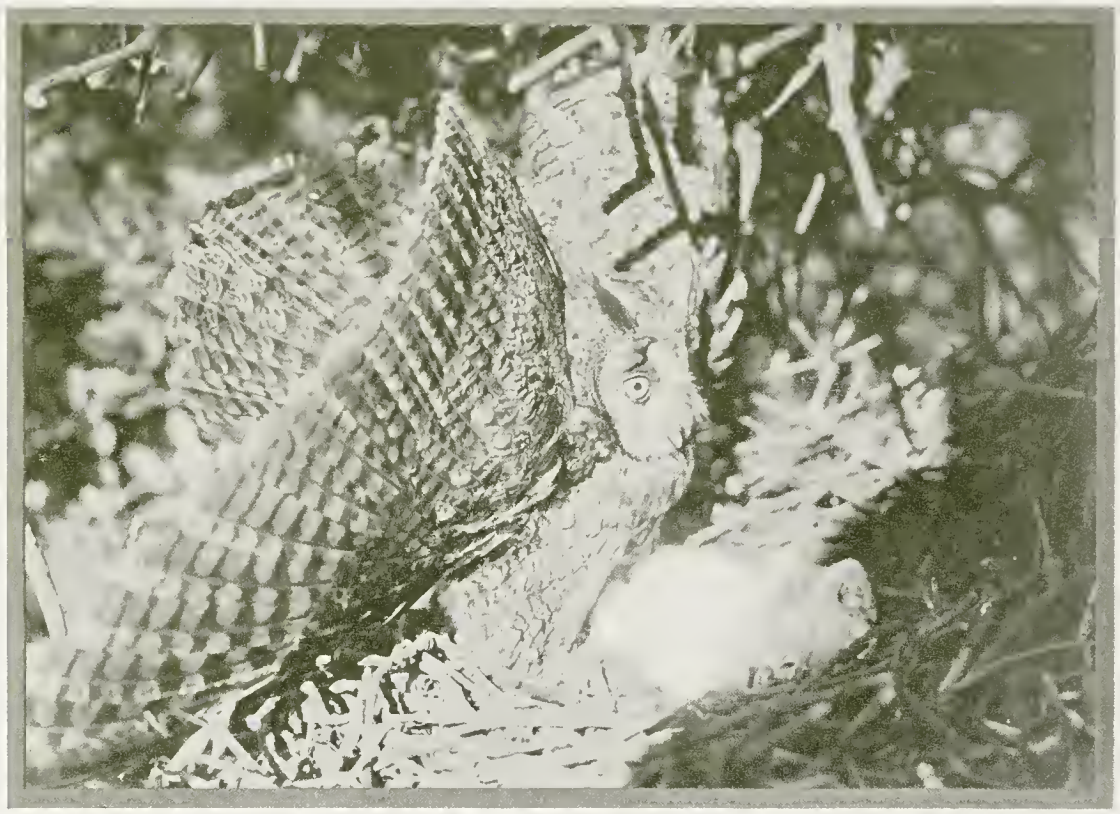
to hear what Maria will say. I paused and canvassed the morale of my contemplated action; then hastily reviewed the chances of wild-cats; and then reached for my gun. Not until I had actually *seen* the mother bird, for it was she, emitting one of those gruesome squalls, could I believe that the noise came from an Owl. Even after doubt was at rest, the cry seemed not less like the snarl of an angry feline. To add to the terrors of the defensive, the husband and father came up and literally proceeded to spread himself. Wings and tail were spread to the utmost, and every feather was ruffled to the fullest extent,—all in a manner calculated to strike terror to the boldest heart. The bird-man managed to control his nerves long enough to note five eggs —but of what color deponent saith not—then hurriedly sought more congenial company.

The notes of the Long-eared Owl are a fascinating study. The call note, oftenest visualized as the conventional "hoot," is scarcely that, but is something softer, tenderer, and more subdued. After the courting season, the male employs this sound to comfort his mate upon the nest. Once we camped at the foot of a cottonwood tree which contained a nest of this bird, and as often as we waked in the still watches, we heard

Taken in San Luis Obispo County *Photo by the Author*

"WE VIEW WITH ALARM"

that low crooning note, tender and mellow, and, above all, *piano*, as it was repeated simply and monotonously at intervals of four or five seconds all night long. The same note is used, also, to admonish the babes or to encourage them before the presence of that dread monster, man.



Taken in San Luis Obispo County *Photo by the Author*

THE SKIRT DANCE
THE MENACE AT ITS UTMOST HEIGHT

Then, besides the cat-fight noises, already mentioned, and which constitute a separate cataclysm of sound, there is the regular note of disapproval, a sort of groaning execration used chiefly by the male, *Morach moraaaoow, werek werek wraaow, wreek wraaa*—all very "flat" and very emphatic.

A fourth note is so unusual, or at least so little understood, as to have escaped general comment.[1] In May, 1907, when our party was camped on the Walla Walla River, in Washington, I first made its acquaintance. I was seated at the time in a willow tree, at a height of twelve or fifteen feet from the ground, beside a nest of young Long-eared Owls, one of a line of four nests which I had been watching for several

[1] See the author's article in point, Condor, Vol. XVI., March, 1914.

days. The youngsters were freezing faithfully, as usual,—all save the runt of the brood who still favored the cowering pose. The male parent had delivered himself of his quaint objurgations, and had retired from the scene in disgust. The female had caterwauled and cajoled and exploded and entreated by turns, all in vain. Matters seemed to have reached an *impasse*, and silence had fallen over the landscape. I had time to note the sage pinks, bright with morning dew, and the subtle, soothing, gray-greens of the sage itself, as it rose in billows over the slopes of the closely-investing hills. All of a sudden the Owl left her perch, flew to some distance and pounced upon the ground, where she could not well be seen through the intervening foliage. Upon the instant of the pounce, arose the piercing cries of a creature in distress, and I, supposing that the bird in anger had fallen upon a harmless Flicker

Taken in Washington *Photo by the Author*

BABY MOUSERS

which I knew dwelt in that neck of the woods, scrambled down instanter and hurried forward. The prompt binoculars revealed neither Flicker nor mouse. There was nothing whatever in the Owl's talons. The victor and the victim were one and the same, and I was the dupe. Yet so

completely was the play carried out that the bird fluttered her wings and trod vigorously, with a rocking motion, as though sinking her claws deeply into a victim. I was astounded. Nor should I believe the evidence of my own eyes to this day, if I had not witnessed the same play repeatedly thereafter. The Owl thought she had me going, and I humored her to the point of absolute personal satisfaction. There was never a trace of fur or feathers or gore on the deserted stage. The distress cries, always convincing, were never overdone, but ceased, as they should, after the first onslaught. Yet if I did not yield a prompt obedience to the lure, the Owl looked about reproachfully and then redoubled her demonstrative wrestle with her alleged quarry.

Taken near San Diego *Photo by Dickey*

A MENACE IN PIN-FEATHERS

IT IS TO LAUGH; BUT WE MAY SUPPOSE HIS LITTLE HEART IS QUAKING

It was noteworthy in this connection that while other birds usually paid little heed to the notes of this Owl, however terrifying in volume or tone, this distress cry commanded instant attention throughout the woods. The small birds began to chatter sympathetically, while Crows and Magpies rallied as though at the blast of a bugle. In fact, some nimble Magpie, as often as not, interrupted the play before it was half finished. This was the clew, if clew were needed, to the explanation. Your humble servant was a big Magpie, who at the sound of conflict might be expected to rush forward and snatch the prize from the victor's grasp. Clever, wasn't it? And,

parenthetically, your Magpie is evidently exactly up to that game, even if the stupid man failed to play to his lead.

The illusion of this decoy ruse (whose further psychology I leave who will to explicate) was most complete; and even inside knowledge of the facts could not lessen the wonder how the Owl could so perfectly reproduce the shrieks of former victims.

ANOTHER ALARMED VIEWER

Taken near San Diego
Photo by D. R. Dickey

The Long-eared Owl enjoys a high reputation as a mouser, and has been passed with honor by the examining board of governmental experts. He does occasionally prey on birds, but there can be no question of his over-balancing services. Most especially this milder-toothed and very fascinating fowl deserves to be distinguished from his dread cousin, the Great Horned *Bubo*.

No. 212

Short-eared Owl

A. O. U. No. 367. **Asio flammeus** (Pontoppidan).

Description.—*Adults:* Ear-tufts very short—scarcely noticeable; entire plumage, except facial disc, nearly uniform buff, ochraceous-buff or cream-buff, striped or mottled with dark brown,—heavily above and on breast, the stripes becoming more narrow on belly and disappearing altogether on legs and crissum; edge of wing white; the wing-quills and tail-feathers broadly barred with brownish dusky; the facial disc gray centrally, with black around each eye and on the bridge. Bill and toe-nails dusky blue; eyes yellow; ear-opening enormous, but fully concealed. *Immature:* Dark brown with ochraceous tips above; brownish-black face, and unstriped underparts. Length 355.6-406.4 (14.00-16.00); wing 304.8-330.2 (12.00-13.00); tail 139.7-158.8 (5.50-6.25); bill from cere 17.2 (.68); tarsus 44.5 (1.75). Adult female larger than male. The preceding measurements include both sexes.

The Short-eared Owl

Recognition Marks.—Little hawk to crow size; general streaked appearance, dark brown on buff; inconspicuous ear-tufts; semi-terrestrial habits.

Nesting.—*Nest:* On the ground or at the end of a short under-ground tunnel: a few sticks, grass, and feathers mark the spot, or else the bird lays on the bare earth. *Eggs:* 4-9; subspherical. Av. size, 39.9 x 31.2 (1.57 x 1.23). *Season:* April; one brood.

General Range.—Nearly cosmopolitan. In North America breeds irregularly south from northern Alaska and Greenland to California, Kansas, and Massachusetts; winters casually from the milder-climated of the northern states south to Guatemala. Resident in the Hawaiian Islands.

Distribution in California.—Common migrant and fairly common winter resident in marshy or open situations, chiefly west of the Sierras. A rare breeder in the larger marshes—definitely recorded from Los Baños (Bishop) and New Hope, Fresno County (Tyler); inferentially from San Diego, San Pedro, and San Francisco Bay.

Authorities.—**Heermann** (*Otus brachyotus*), Jour. Acad. Nat. Sci. Phila., ser. 2, ii., 1853, p. 261 (Suisun, Calif.); *Miller*, Condor, vol. xii., 1910, p. 12 (fossil); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 48 (San Joaquin Valley, breeding habits).

IN SECTIONS where all three birds are common, a rough-and-ready division of territory has been agreed upon by the Long-eared, Short-eared, and Burrowing Owls—*Owlia est omnis divisa in partes tres.* To the Long-eared Owl has fallen the right to search groves, thickets and piney woods; to the Burrowing Owl belong all pastures and the open sage; whilst the Short-eared has chosen meadows, rye grass areas, swampy bottoms, and all expanses of rush and reed. This equitable arrangement regards, of course, only Owls, for the last-named species has always a keenly contesting rival of his claims in the person of the Marsh Hawk, or Harrier (*Circus c. hudsonius*). So sharp has the rivalry become, to interpret the situation fancifully, that the Owl, no longer content with a monopoly of the night rights, hunts over the contested preserve on all cloudy days, and on some bright ones as well. Indeed, he has almost forgotten the family tradition which enjoins upon all good Owls careful avoidance of sunlight, and seems not at all disconcerted thereby.

Let no one suppose that because the bird under consideration has abbreviated ear-tufts, he is anywise "short" on hearing. On the contrary, his ear-parts are enormously developed. Part the feathers on the side of the head, bringing the ear-coverts forward, and you will see it, an ear-opening some two inches long—as long, in fact, as the skull is high, and proportionately broad.

It is more than a coincidence that these marsh prowlers, the Harrier and the Short-eared Owl, should be provided with such a remarkable auditory apparatus. When one considers the circumstances of their life, the reason for this common provision becomes very plain. In a thicket of reeds, especially if they be dry, one hears a great deal more than he

is able to see. Movement through grass or tules without noise is almost an impossibility, even for the tiniest bird or mouse. Hence, it becomes important to locate any creature in the tangle by hearing. Surely a Short-eared Owl could hear the footfall of a beetle at a hundred yards!

Short-eared Owls are somewhat hawk-like in their appearance, whether quartering to and fro across the meadows, or watching from a convenient post. There is more flapping of wing than in the case of the Marsh Hawk, but the movement is absolutely noiseless, being hushed by the soft plumage of the axillaries and under wing-coverts. Now and then the bird, tiring of an exclusive swamp diet, goes poaching. Taking up a station upon the ground, it silently awaits the appearance of some timid gopher, which the Burrowing Owl has overlooked. In securing its smaller victims, the Owl does not pounce and tarry, but snatches in mid-flight, falcon-fashion, and retires to some favorite perch to eat.

Its food consists largely of meadow mice, gophers, and other rodents, supplemented by grasshoppers, crickets and beetles, with now and then a small bird. So great are its services to the rancher, and especially to the hay-maker, that the owner may well count it a piece of good fortune when a pair or a colony of them take up quarters in the alfalfa field. Better run the mower carefully around every nest than to suffer the *microtus* mice to continue their work of devastation.

These birds are largely resident in winter and migratory in suitable localities throughout the State. While not gregarious, after the fashion of Blackbirds, they are likely to pause during migrations in especially attractive places, irrespective of previous occupants, so that it is no rare sight to see a dozen or a score of them hawking about in a single swamp. Once in some stubble fields near Fresno, Mr. John G. Tyler encountered unusual numbers of certain associated Raptors, and estimated that there were not less than two hundred Short-eared Owls in sight at one time, all hunting busily. Some few remain to nest, at least as far south as Fresno; and there are reports, persistent but unconfirmed, of their nesting in Los Angeles County. They are usually seen in pairs at all seasons; and Bendire considers that they are mated for life. Housekeeping is of the humblest, home being a mere shake-down of grass somewhere upon the ground; and it is only when the nest is threatened that the birds muster "a weak whistling sort of note."

No. 213

Spotted Owl

A. O. U. No. 369. **Strix occidentalis** (Xantus).

Synonyms.—Western Barred Owl. Xantus's Owl. Hoot Owl. Wood Owl.

Description.—*Adults:* Above warm brown, spotted with white and varied, slightly, by ochraceous, the spots rounded on head and back, broader on cervix and wings; the quills and tail irregularly spotted, or broken-barred, with dull ochraceous or pale brown, irregularly changing to white; sides of breast much like back, the remaining underparts dull ochraceous boldly spotted on middle of breast and on belly and sides with white, and irregularly marked, or herring-bone-barred, with warm brown; the flanks, legs (including tarsi), and wing-linings with very little white, mottled or faintly barred brownish and ochraceous instead; feathers about base of bill chiefly white with brownish black shafts; facial disc behind and above eye dark ochraceous, faintly concentric-barred with dark brown; the rim of disc darker brown (nearly bister) on inner aspect, finely mingled brown, ochraceous and white on outer aspect (thus curiously epitomizing the whole color scheme). Bill bluish dusky basally, changing to yellow on tip; claws light brown. *Nestlings:* Chiefly pale brownish buffy, broadly barred except on head and legs with light brown. Length of male about 466.09 (18.35); wing 320 (12.60); tail 215 (8.47); bill from cere 21.3 (.84); tarsus 59 (2.32). Females average larger; length up to 482.60 (19.00).

Recognition Marks.—Crow size; rounded appearance of head; strikingly white-spotted; smaller and without "horns," as distinguished from Pacific Horned Owl.

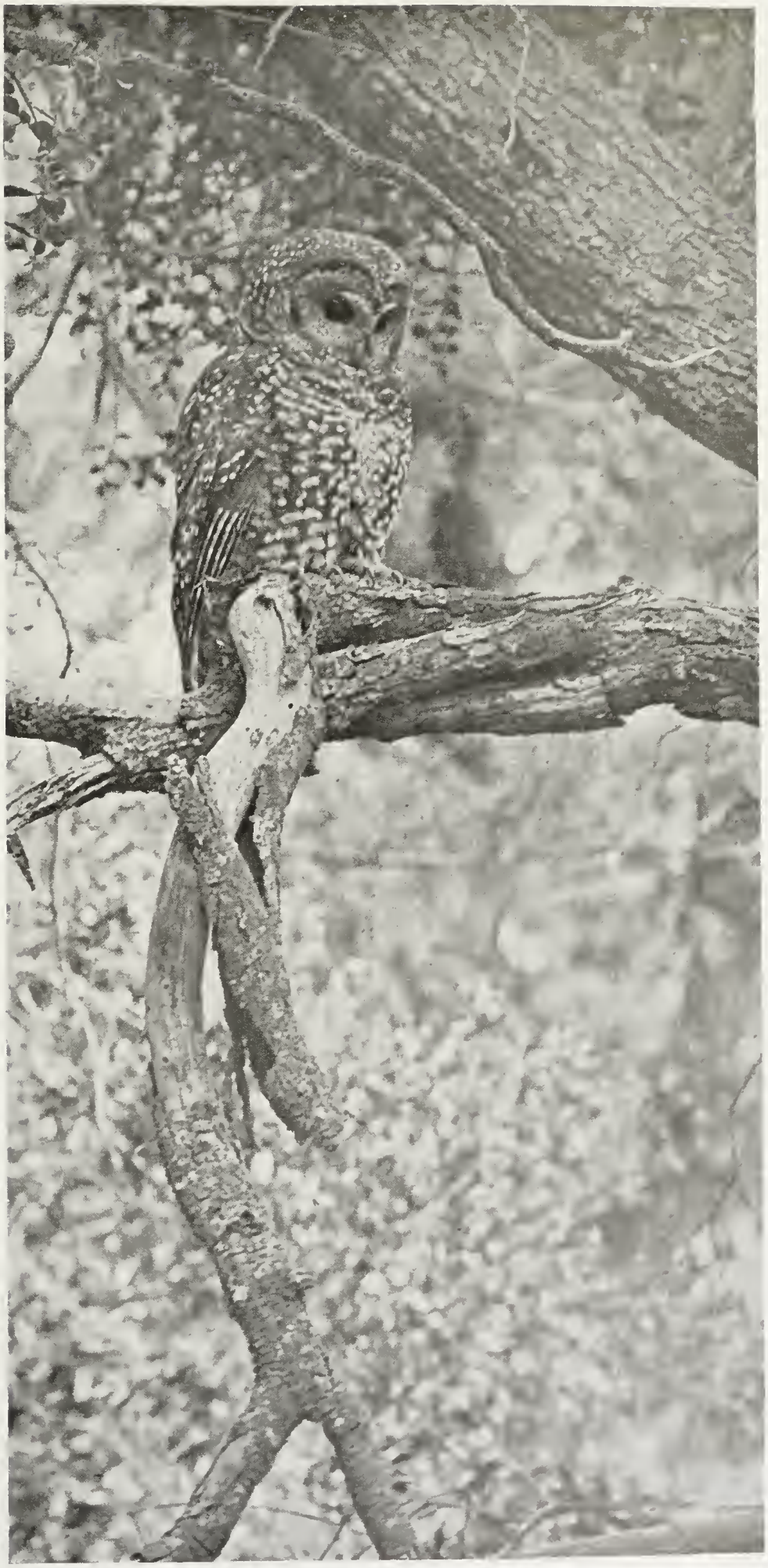
Nesting.—*Nest:* Usually an old Raven's nest, lodged in cranny of cliff; in default of such bird probably uses unlined cranny, much after the fashion of *Bubo virginianus*. *Eggs:* 2 or 3; subspherical, white. Av. size 47.75 x 40.6 (1.88 x 1.60) (Peyton). *Season:* March–April; one brood.

General Range.—Western North America from northern Mexico and northern Lower California north along the coast to British Columbia, and in the mountains to southern Colorado.

Distribution in California.—Not common resident in Upper Sonoran and Lower Transition zones west of the Sierran divide. Most common in San Diegan district.

Authorities.—**Baird** (*Syrnium nebulosum*), Rep. Pac. R. R. Surv., vol. ix., 1858, p. 921 (Ft. Tejon); *Xantus*, Proc. Acad. Nat. Sci. Phila., vol. xi., 1859, pp. 190, 193 (orig. desc.; type locality, Ft. Tejon); *Swarth*, Univ. Calif. Pub. Zool., vol. vii., 1910, p. 3 (desc. juvenal; crit.); *ibid.*, Condor, vol. xvi., 1915, p. 15 (desc., meas., crit.); *Dickey*, Condor, vol. xvi., 1914, p. 193, figs. (desc., photos, etc.; Ventura Co.); *Oberholser*, Proc. U. S. Nat. Mus., vol. 49, 1915, p. 251 (syst.; monogr.).

EVEN the sight of a Spotted Owl is counted a bit of a rarity in these parts; and specimens taken are still dutifully reported in the columns of the "Condor," or elsewhere. Yet when the great day comes, the bird of mystery is likely to prove as obliging as a well-bred hen—or shall we say as a sleepy rooster? It may be his favorite roost that we



Who—Who are you?

From a photograph by Donald R. Dickey

Taken in Ventura County

have blundered upon, all in a shady dell, unfrequented of men. There is no need for anxiety. The bird is mildly curious himself, and not in the least alarmed. His aspect is anything but ferocious—benevolent, rather—and he looks for all the world like some patriarchal gnome disturbed at his slumbers, yet not resentful. We vote him handsome at the first breath, and admiration grows as we dwell upon the sleekness, the mellow rotundity, and the exquisite harmony of the figure, and especially of the costume before us. Spotting suggests the conspicuous, and this bird is spotted with white from head to foot, on a background the deepest of wood-browns; and yet the pattern blends in so perfectly, is so essential a part of the checkered sunlight falling upon branch and leaf beside him, that we say, "Why, of course. How could he be any different?" Whereas, an object merely brown or merely white would stand out here like a sore thumb, this camouflaged statuette almost disappears under the searching eye. We must circle about him to coax an inclination of the head, or a tell-tale movement of the foot. Now and again the benignant creature winks prodigiously, and the ladies with us shriek with laughter. Silly things! The bird is not winking at *them*. He was up late last night and the sun hurts his eyes, that's all.

Taken in Los Angeles County
From a photograph, Copyright 1921, by Wright M. Pierce

THE BIRD IS MILDLY CURIOUS HIMSELF

Our knowledge of the Spotted Owl is chiefly derived from two accounts of their nesting which have appeared in the columns of the "Condor." The first of these, by Mr. Lawrence Peyton,[1] tells of the discovery, in 1908, of a nest situated in Castaic Canyon, in a hole on the face of a perpendicular granite cliff, and at a point about fifteen feet up. From

[1]Condor, Vol. XII., July, 1910, pp. 122, 123.

Taken in Los Angeles County
From a photograph, Copyright 1921, by Wright M. Pierce
"WE VOTE HIM HANDSOME"

grown young. The situation was an old Raven's nest, placed 65 feet up in a pothole, on a perpendicular cliff of conglomerate over 200 feet high. Fortunately the nesting-site was commanded by trees, and the old birds were very accommodating, as our accompanying illustrations show. Indeed, the behavior of the old birds throughout the period of Mr. Dickey's study was a compound of fearlessness, confidence, and placid

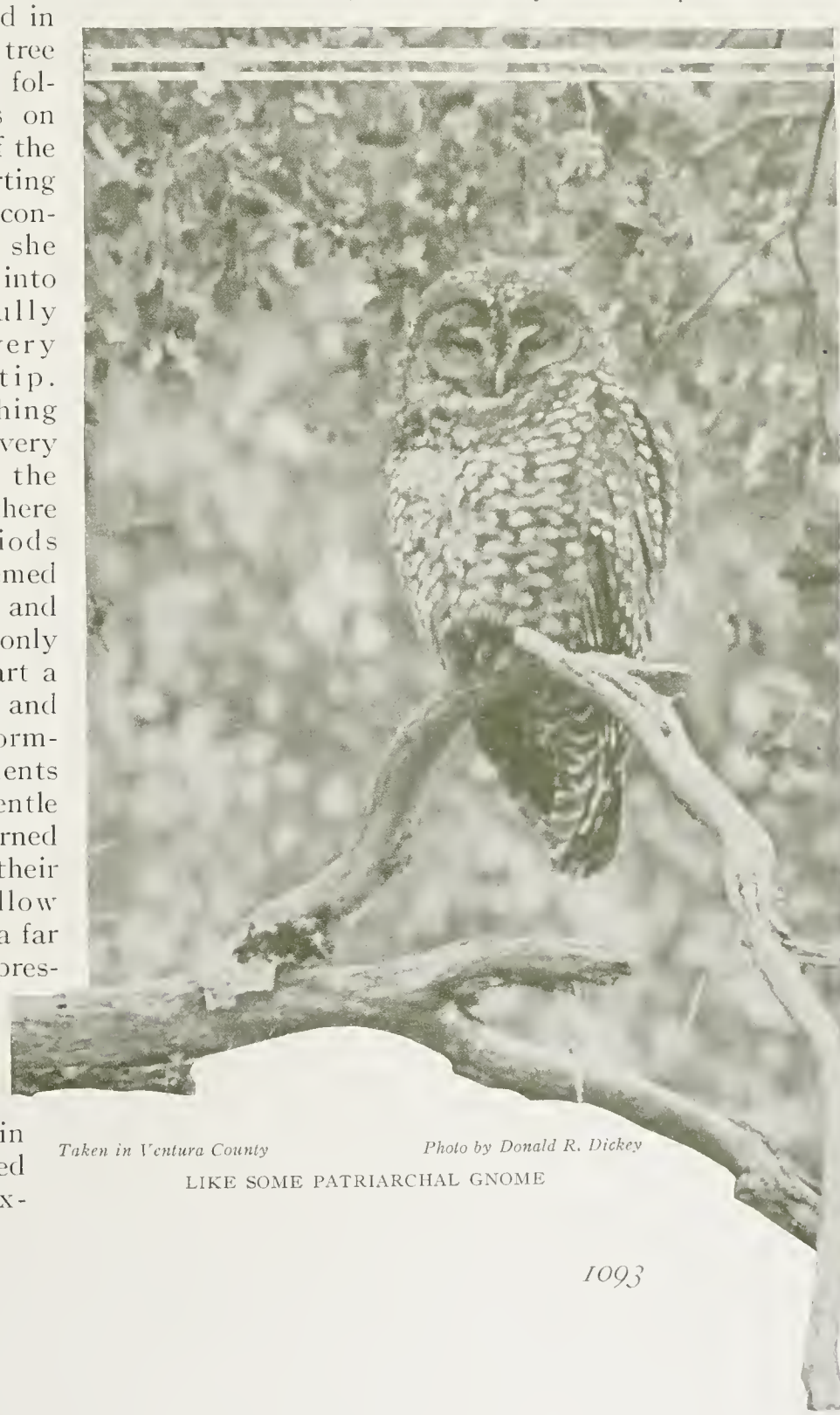
[1] Condor, Vol. XVI., Sept., 1914, pp. 193-202.

this nest a set of two eggs was secured April 1, 1909, and a set of three, with the parent birds, March 30, 1910. On the 15th of May, 1913, Mr. Donald R. Dickey[1] with two assistants, working in the mountains of Ventura County, found a Spotted Owl's nest which contained two well-

Taken in Ventura County *Photo by Dickey*
A FEATHER-BED BABY

indifference. The all-important business of an Owl's daytime hours is slumber; and it was politely assumed that no gentleman would wish to do anything which would seriously interfere with that pleasant occupation. Will you look at the babies? Oh! very well; but only let us sleep.

Safely ensconced in a neighboring fir tree Dickey makes the following observations on the morning toilet of the mistress: "Contorting herself into every conceivable position, she shook her feathers into place and carefully preened away every frayed feather tip. There was something ludicrous in her every action. Even in the midst of her toilet, there were sudden periods when Morpheus seemed to overpower her, and she would doze off, only to awake with a start a few minutes later and continue the performance. Her movements were much more gentle than those of the Horned Owls. The lack of their ear tufts and yellow irides also gave her a far more agreeable expression, although I must confess that certain startled expressions,—when one did succeed in startling her,—seemed unpleasantly lynx-



Taken in Ventura County *Photo by Donald R. Dickey*

LIKE SOME PATRIARCHAL GNOME

like. When she moved along a limb her every movement suggested a parrot, really a striking resemblance."

Not satisfied, however, with these distant views, and finding their tackle too short to reach the nest from above, the scientists left a rope dangling and travelled over night to town for more apparatus. Returning, they found serious changes: "Picture the three grim cliff scalers with their five hundred feet of rope riding up and finding the owls not on the ledge at all, but come to meet them! It was really as bad as that, for there, in an insignificant oak across the ravine, sat the two youngsters with their parent. All three were well within the reach of any six-year-old boy. They were distant a hundred yards or so from the nest, and the hillside rose so steeply on that side that they were almost level with the nest although not over fifteen feet from the ground. That the young could have reached the spot unaided seems incredible, for although the primaries were well grown out, they were, with that exception, in the complete down, and were still weak. The

Taken in Ventura County *Photo by Dickey*

"THAT THE YOUNG COULD HAVE REACHED THE SPOT UNAIDED SEEMS INCREDIBLE"

A Drowsy Sentry

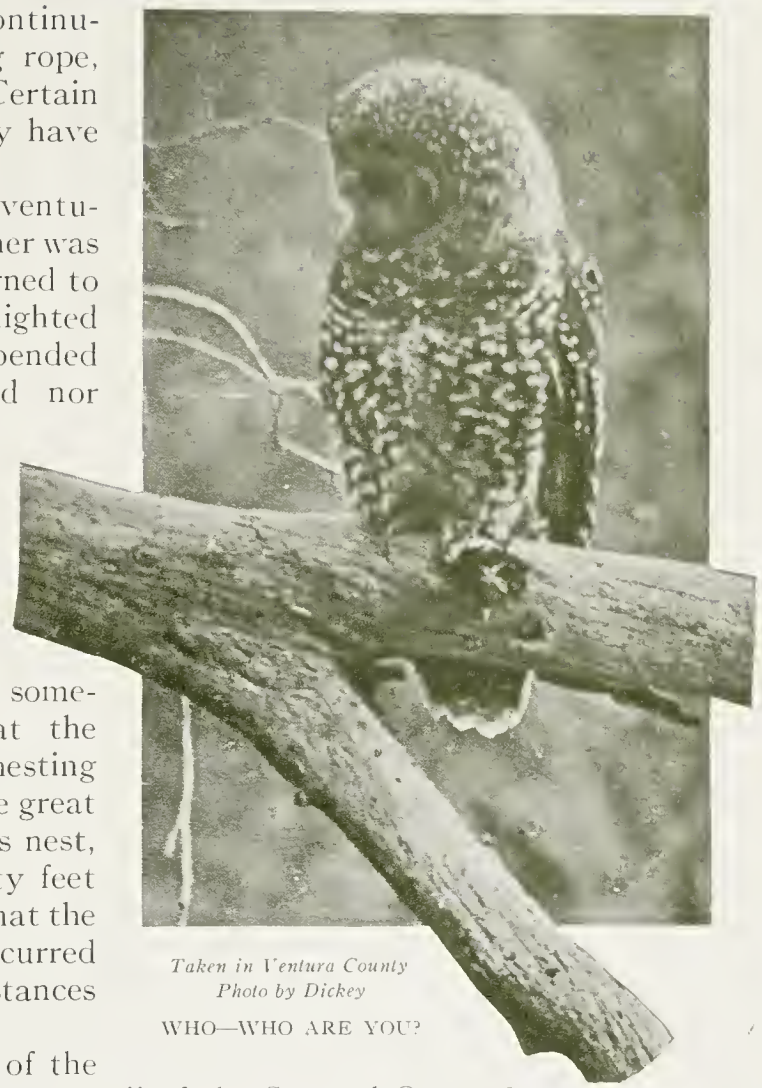
This adult Spotted Owl sleeps under fire

From a photograph by Donald R. Dickey

Taken in Ventura County

alternative is that the old birds, continuing their distrust of the dangling rope, had deliberately moved them. Certain it is that they would not normally have left the nest perhaps for weeks."

One of these young birds was eventually required for science; but the other was dutifully and at much hazard returned to the nest, whereupon the parent alighted within eighteen inches of the suspended ornithologist, and neither offered nor feared molestation. The scientists had the satisfaction of seeing the old birds accept the situation and attend their remaining offspring the following day *in situ*.



Taken in Ventura County
Photo by Dickey

WHO—WHO ARE YOU?

On April 5th, 1914, I found a nest in western Kern County in a somewhat similar situation, save that the country was entirely open, and the nesting cliff faced the treeless expanse of the great Central Valley. The young in this nest, an old Raven's, upon a ledge thirty feet up, were more than half grown, so that the deposition of eggs must have occurred much earlier than in the instances enumerated.

There is no clear-cut account of the notes, and especially of the mating "song," of the Spotted Owl. Clay[1] enjoyed a midnight serenade wherein the birds produced a "ghostly racket," preceded by a long-drawn-out whining, which gradually increased to a grating sound. In this performance two birds, attracted, no doubt, by the light, ventured upon a limb within three feet of the inquisitive student. Peyton[2] likens the call of the male to the distant baying of a hound, and Dickey[3] confirms this estimate. The last-named authority gives the adult cadence as *whoo, whoo, who, who*, the first two syllables being noticeably longer than the others. The note of anxiety is given as a "low, musical indrawn whistled '*Whee ee*'," followed later by an "indescribable turkey-like chuckle." A concert attended by the author,

[1]Condor, Vol. XIII., p. 75.
[2]Loc. cit., p. 122.
[3]Loc. cit., p. 200.

near Ukiah, and attributed by elimination to this bird, was characterized by considerable variety of inflection. The *hoot* notes were "narrower" and higher-pitched than those of a Horned Owl, and their utterance seemed to follow no definite order: *Hoó ah hoó ah*, and again, *hoó ah hoo hoó ah*.

Little is known, either, of the food habits of this rare Owl. Dickey found rather scanty remains of mice and brush rats at the Owl's nest, and saw feathers of Crested Jays which he attributed to a Strigine banquet. Curiously, however, two instances are on record where remains of Pygmy Owls, *Glaucidium gnoma*, have been found in the stomachs of recently killed Spotted Owls. Evidently there is scant courtesy among brigands.

No. 214

Great Gray Owl

A. O. U. No. 370. **Scotiaptex nebulosa nebulosa** (Forster).

Description.—*Adult:* No ear-tufts; general plumage mottled — dusky, grayish brown, and dull whitish — darker above, lighter below, where the dusky markings are indistinctly longitudinal on breast and belly, and transverse on flanks; the whitish impure and with a fulvous element on the margin of the facial disc, hind-neck, wings, tail, etc.; wing-quills and tail irregularly barred, dusky and mottled gray; facial disc about six inches across, light gray, with numerous dusky lines imperfectly concentric about each eye; the edge of the disc dark brown and fulvous, and with more white below; the eyes bordered by black on the inner margin; iris yellow. Bill pale yellow; claws bluish dusky; feet and toes heavily feathered. Length 635-762 (25.00-30.00); wing 406.4-457.2 (16.00-18.00); tail 279.4-317.5 (11.00-12.50); bill with cere 35.6 (1.40).

Recognition Marks.—Size largest—Brant size; gray face; absence of ear-tufts will immediately distinguish it from the Horned Owls.

Nesting.— *Nest:* Of sticks and moss, lined sparingly with down, placed high in trees, usually coniferous. *Eggs:* 2-4; white. Av. size, 54.9 x 43.4 (2.16 x 1.71). *Season:* April–June, according to latitude; one brood.

Range of *Scotiaptex nebulosa.*—Northern portion of Northern Hemisphere.

Range of *S. n. nebulosa.*—Boreal North America, breeding from central Keewatin and central Alberta north to the limit of trees, and rarely south along the Cascade-Sierra mountain chain to the Yosemite sector. South irregularly and rarely in winter into the northern or north-central states.

Occurrence in California.—Rare winter visitor in northern portion of State. Has also bred recently in the central Sierras near Yosemite.

Authorities.—Newberry (*Syrnium cinereum*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 77 (upper Sacramento Valley); *Belding*, Land Birds Pac. Dist., 1890, p. 50 (Chico); *Grinnell*, Condor, xvi., 1914, p. 94 (McCloud).

GREAT Gray Ghost would be a more fitting title for this sepulchral bird, whose very existence is a mere tradition to most of us. Although

reckoned the giant of the owl kind, this bird is really not so "great" as he looks, for he is mostly feathers, and his body, when stripped, neither bulks so large nor weighs so much as that of the Great Horned Owl. His visage, also, lacks the fierce aspect which horns impart, and the bird himself is said to be milder mannered than are the Bubos. The forest areas of the "North Countree" are his proper domain, even up to the very limit of trees; and from thence he occasionally, but not commonly, flutters out upon the open marshes and tundras. Mr. Dale, while stationed upon the Yukon, found the birds "remarkably stupid," and declares that he has caught them by hand in the daytime. Certainly their flight is heavy and their motions far from graceful; but the few specimens which straggle down across the borders of our northern states in winter are never left long to their own devices. The most we know of them is that, when folded away in a cabinet drawer, they look like great gray babies, over-rash to have left the protection of their northern nursery.

The claim of this rare northern species to a place in our pages rests upon a solitary example taken at Chico,[1] supported by Newberry's[2] earlier assertion that he had proofs of its existence in the Sacramento Valley. But Dr. Cooper once took a specimen near the mouth of the Columbia River in June (1854), and there are even yet tantalizing rumors of its presence during the breeding season in the forests of Washington. There can be no harm, therefore, in letting the imagination run back to a day, not many milleniums distant, when this great gray ghost haunted our own grim forests of redwood and fir.

The foregoing essaylet was penned in 1914, and is retained unchanged in order that it may afford a background for the subjoined account, which, through the distinguished courtesy of its authors, Dr. Joseph Grinnell and Dr. Tracy I. Storer, we are permitted to publish here, in spite of the fact that it is already "in press" as "The Yosemite Report," prepared under the auspices of the Museum of Vertebrate Zoology, and issuing from the University of California Press.

"The discovery of the Great Gray Owl in the Yosemite section was one of the notable events in our field experience. And what was most surprising was the fact that the bird was apparently quite at home, and nesting. No previous record of the breeding of this northern species of owl south of Canada is known to us, and its occurrence, even as a winter visitant within the northernmost of the United States, is not frequent.

"On June 18, 1915, we were camped to the south of Yosemite Valley on the Glacier Point road within two miles south of Ostrander Rocks. A long trap-line beginning at camp led up the gentle slope towards the latter

[1] Belding, Land Birds of the Pacific Coast District, 1890, p. 50.
[2] Rep. Pac. R. R. Surv., Vol. VI., pt. IV., p. 77 (1857).

landmark and through a fine forest of red fir. On the previous days' attendance of this line, distant glimpses were had, morning or evening, of a large bird in silent flight among the trees. On the day of discovery, however, the diminutive kinglet pointed the way and really deserves all the credit. From a distance through the forest came the low but insistent *wer-rup*, *wer-rup*, *wer-rup* of a Ruby-crown, its unmistakable note of anxiety. This clue was traced by the expectant naturalist to a tall fir, out from near the summit of which there presently flew a great owl. The bird alighted at the top of a Jeffrey pine nearby, where it was shot, and (giving several deep-pitched *whoo's*), fell to the ground wounded. At this, another owl appeared in flight from one fir top to another, and was also secured.

"For purposes of photography the wounded bird was taken back to camp alive. Its huge facial discs, each centered by a great yellow-irised eye, its snapping bill, and its spasmodically clenching claws, all contributed to profound respect on our part when handling it, and in securing pictures.

"On succeeding days when a careful search of the vicinity was made, a large nest of sticks, one hundred feet above the ground on the close-set branches of a fir next to the trunk, was found, which, it is thought, belonged to the owls. No close examination of it was made. On June 19 in the same stretch of woods the deep notes of an owl were heard three times repeated, but the bird could not be located. This time the kinglets failed us.

"The two specimens secured proved to be male and female, probably a mated pair. As is usual with owls, the female was slightly larger, measuring: total length 595 millimeters (nearly two feet); expanse of wings 1370 millimeters (four and one-half feet). The male measured: length 580 millimeters; expanse 1350. In both birds the iris was bright straw yellow; bill greenish, becoming yellow towards tip; claws lead-color, darkening towards tips. The stomach of each bird was empty.

"As an indubitable indication of her breeding during the current nesting season, the female was found to have a large bare tract on the lower surface of her body, including the belly and insides of the thighs, from which the larger feathers had all been removed. Associated with this condition, directly beneath the bare skin, were layers of fat, though the bird was otherwise lean. As is well known, many birds show, during the nesting season, the same or similar adaptations for the better performance of the functions of incubation. The male Great Gray Owl lacked any such modifications, and we may infer that in this species the female alone performs the duty of incubation. The reproductive organs of both the birds indicated that the time of actual egg-laying was long past. It seems more than likely that a brood of young had been reared in the vinicity and, approaching maturity, had scattered out through the adjacent woods.

"On July 1, a Great Gray Owl was met with on the old Snow Flat trail, a mile or so north of Indian Rock. When first seen it was perched on a low limb of a lodge-pole pine not over ten feet above the ground. Two Juncos nearby were in spasms of excitement. The owl, taking alarm, flew to a higher branch of a nearby tree, and thence made off into a dense stand of red firs. Its species was easily recognized by its great size, dark gray plumage, big round head without ears, and by the slow flapping of its broad rounded wings. No note was given by this bird. This was at 1:30 p. m. As far as our observations went, this species would seem to be more active by daylight than other owls, such as the Pacific Horned.

"In Aspen Valley, on October 13, 1915, at 7:30 p. m., an owl note, supposedly of the Great Gray, was heard; it proved impossible to verify the identity. Near Tamarack Flat, on May 24, 1919, similar notes were heard, but the birds were not seen. Notes of certain individual Band-tailed Pigeons proved so much like those of this owl as to cause confusion until the authors of the notes were actually seen to be pigeons."

No. 215

Saw-whet Owl

A. O. U. No. 372. **Cryptoglaux acadica** (Gmelin).

Synonyms.—Acadian Owl. Kirtland's Owl.

Description.—*Adult:* Without ear-tufts; upperparts dull reddish brown (Prout's brown), unmarked on back, rump, and nape; sharply streaked on forehead, crown, and sides of neck with white; cervix with considerable irruption of basal white; outer scapulars and middle wing-coverts with large rounded spots of white; semicircular white spots on outer webs of outer primaries and large rounded white spots on inner webs of primaries and secondaries; tail white-tipped and crossed by three interrupted bars of white; wing-linings, axillars, sides (narrowly), flanks, legs, and feet, pale tawny; the remaining underparts white, heavily and broadly streaked with reddish brown; border of eye black, surrounding feathers white, shading into tawny and mingled tawny and brown on outer disc-feathers, rim chiefly mixed brown and white, but brown clear below and sharply set off by narrow white pectoral band. Bill and claws blackish. *Immature* birds are much darker (dark sepia to dark vandyke brown) on head, breast, and upperparts; white spotting much reduced, chiefly confined to forehead and quills; posterior half of underparts plain dark tawny; contrasts in black and white of facial disc more emphatic. Length 177.8-203.2 (7.00-8.00); wing 138 (5.43); tail 68 (2.68); bill from cere 12 (.47). Females average a little larger.

Recognition Marks.—Towhee size, but appearing larger; larger than Pygmy Owls (*Glaucidium gnoma*); body longer, not chunky; tail not conspicuous nor held at angle; without ear-tufts as compared with *Otus asio* group.

Nesting.—*Nest:* In hollow trees, deserted woodpecker holes, etc. *Eggs:* 4 to 7; white, subspherical. Av. size 30.5 x 25.4 (1.20 x 1.00). *Season:* April–June, according to altitude; one brood. (Fyffe, May 17, 1913—brood of five young—Ray).

General Range.—Temperate North America. Breeds from the southern tier of British Provinces south to the southwestern states, and east of the Rocky Mountains to Nebraska, Ohio, and Maryland; winters irregularly southward; accidental (?) in Mexico and Guatemala.

Occurrence in California.—A rare breeder at least in the Transition and Canadian zones of the central Sierras, and probably south to the San Jacinto Mountains (Round Valley, Aug. 11, 1898, Stephens). More widely and more frequently in evidence in winter, at which season its numbers are probably augmented from the North.

Authorities.—Gambel (*Nyctale acadica*), Proc. Acad. Nat. Sci. Phila., vol. iii., 1846, p. 47 (Monterey); *Ray*, Condor, vol. xvi., 1914, p. 65, figs. (Sierra Nevada, breeding); *Pierce*, Condor, vol. xxii., 1920, p. 40 (San Bernardino Mts., breeding).

WE ARE NOT unlike song birds ourselves, in that the advent of an Owl, of whatever species, will make a ripple of excitement in our day. The nether world has erupted. We have caught a glimpse of tasseled ear or cloven hoof and we are strangely wrought up thereby. The reaction of curiosity, which almost invariably follows, has spent itself in vain upon these people of the underworld, the night world, and what we do not know about some of the Owls is likely to pass as a legacy to our children's children. There have been those who knew a good deal about the Saw-whet Owl. The late Dr. Julian Ralph, of Utica, New York, was chief among them, for he assisted in the taking of five sets of their eggs in that region. On the other hand, there are men a-plenty, reputable ornithologists among them, who never saw a Saw-whet Owl, and who do not know their notes.

Something more than a dozen occurrences of this bird have been noted in California. Most of these have been in winter, but there are just enough summer records to make us suspect that the bird may be found breeding in forests, at suitable elevations, almost anywhere in the State. Authorities differ as to whether the Saw-whet Owl is migratory, and it is probably not so in the strict sense. It is, however, irregularly nomadic in winter and the number of local birds is likely to be increased by visitors from the north. Those who stay to brave the rigors of a northern climate are likely to suffer through failure of food supply, and many winter specimens have been taken by hand in an emaciated condition or picked up dead. Mr. W. E. Saunders thus found twenty-four dead birds along the northern shore of Lake Huron in 1906. It would be difficult to imagine any other species of Owl suffering in this fashion with Tree Sparrows and Juncoes about. But the fact is the Saw-whet appears to abstain altogether from bird-flesh, and to depend entirely upon mice or frogs and insects. It is, therefore, to be warmly commended and protected.

The notes of the Saw-whet Owl have been from time immemorial compared to the "filing of a cross-cut saw." The comparison must have

originated with some lonely woodchopper who was suffering with the toothache. Certainly it is a gross exaggeration, and unfair to the bird. During the brief courting season, when alone the notes are heard, the male is a most devoted serenader; and his song consists of breathless repetitions of a single syllable, *whŏŏp* or *kwŏŏk*, vibrant and penetrating, but neither untender nor unpleasing. In the ardor of midnight under a full moon, this suitor whoops it up at the rate of about three whoops in two seconds, and this pace he maintains with the unfailing regularity of a clock. But to prevent his lady love from going to sleep, he changes the key occasionally. In quality this *Nyctaline* note is not unlike the more delicate utterance of the Pygmy Owl (*Glaucidium sp.*), the *sipŏŏlk(ng)* note. Indeed, I supposed these two notes proceeded from the same bird until Mr. Allan Brooks set me right. There can be no confusion, however, as between the incessant cadences of the Saw-whet and the xylophone "song" of *Glaucidium*. No sweeter moonlight memory comes back to the writer than that of a night spent in camp among the silvered candelabra firs which border a certain prairie south of Tacoma. The moonlight was so palpable a joy that the sleeper must rouse ever and again to taste its fulness; and as often as one stirred on his bed of mingled fern and "sweet-in-death," he heard the sweet, unfailing clamor of the Saw-whet, as he pressed his amorous suit. And ever and again, like a mocking chorus, came the tiny ghostly tinkling rondel of his Pygmy rival—*Abiunt amores!*

No. 216

Screech Owl

No. 216a McFarlane's Screech Owl

A. O. U. No. 373h. **Otus asio macfarlanei** (Brewster).

Description.—"Similar in coloration to *O. a. bendirei* but much larger" (Ridgway). "Larger size, greater extent of blackish markings on the contour feathers generally, and the browner tone of color dorsally, serve to distinguish it from any specimen of the more southern California races" (Grinnell).

Range of *O. a. macfarlanei.*—The semi-arid Upper Sonoran zone of the "Columbian trough" from southern British Columbia to northeastern California.

Occurrence in California.—Record based upon a single specimen, #16027, U. S. Nat. Mus., a male taken by John Feilner at Fort Crook in extreme northeastern Shasta County. Surmised, however, to be the resident bird of the Modoc region.

Authorities.—**Brewster** (intergrade between *bendirei* and *kennicotti*); Bull. Nutt. Orn. Club., vol. vii., 1882, p. 32 (Ft. Crook; see Grinnell, *postea*); *Ridgway*, Birds N. and M. Am., part vi., 1914, p. 697 (n. e. Calif.); *Grinnell*, Condor, vol. xxi., 1919, p. 173 (status in Calif.).

Taken in Monterey County *Photo by the Author*

ORPHANS

No. 216b California Coast Screech Owl

A. O. U. No. 373c. **Otus asio bendirei** (Brewster).

Synonym.—Bendire's Screech Owl.

Description.—*Adult:* With more or less conspicuous ear-tufts. General plumage finely mottled brownish gray, boldly striped with black; above, the tone produced by fine mixture of light ochraceous, pale grayish white, and dusky; black streaks centrally on feathers, heavily and finely on head, more sparingly on back and wings; outer webs of outer scapulars and greater coverts chiefly white, appearing as large rounded spots; quills coarsely barred, fulvous and dusky on outer webs, more obsoletely and sparingly on inner; underparts chiefly dull whitish, marked coarsely with central streaks of blackish, and finely and irregularly cross-barred with the same—the effect on the sides of the belly is as though the bird were covered with crawling insects having narrow black bodies and four or five pairs of black legs set at varying angles; middle of belly and lining of wings dingy white or palest tawny, nearly immaculate; facial disc not sharply set off from surrounding plumage, although defined by rim of brownish, its feathers white with black shafts around base of bill, white with fine herring-bone pattern of blackish distally. Bill blackish paling on tip; claws horn-color, darkening on tips; iris yellow. *Immature:* Entire plumage, except quills and rectrices, finely barred dusky and whitish. Length of adult 203.2-247.6 (8.00-9.75); male: wing 161.9 (6.37); tail 81.1 (3.19); bill from cere 14.1 (.555); female: wing 166.2 (6.55); tail 84.1 (3.31); bill from cere 14.7 (.579).

Remarks.—This form, unlike *O. a. typicus*, *O. a. nævius*, and many other full species of the genus *Otus*, has no rufescent or "red" phase. Its color tone, in fact, is singularly uniform. But Mr. Grinnell has pointed out that there is a noticeable gradation in tone from the darker and warmer specimens of the northwestern part of the State through average specimens of the Bay region, to lighter and grayer birds from Walker's Pass and the vicinity of Los Angeles; and he has given the name *O. a. quercinus* to the last-mentioned. There is no doubt that the tendency exists, but it is occasionally contradicted by local examples, and I do not follow Mr. Grinnell in according it a separate name.

Recognition Marks.—Robin size, but appearing larger; ear-tufts—"horns"—with size, distinctive in range; darker and browner than *O. a. gilmani*.

Nesting.—*Nest:* An old woodpecker hole or natural cavity in stub or tree, usually at moderate elevations. Sometimes lined indifferently with casts, trash, and feathers. *Eggs:* 2 to 4; subspherical, white. Av. size 35 x 30 (1.38 x 1.18). *Season:* March–May; one brood.

Range of *Otus asio.*—Temperate North America, breeding from Sitka, Alaska, southeastern British Columbia, and northern border of the eastern states, south into northern Mexico.

Range of *O. a. bendirei.*—"California, except southeastern desert region (and, probably, northern coast district) and south central Oregon (Fort Klamath)" (Ridgway).

Distribution in California.—Resident in Upper Sonoran and Transition zones west of the Sierran divide. Most common in San Diegan district and along the inner coast ranges south of San Francisco Bay. Also common along the timbered foothills of the western Sierras north to Shasta. It is purely a matter of opinion whether specimens from Eureka should be referred to *bendirei* or to *brewsteri* of the Oregon Coast.

Taken in Monterey County *Photo by the Author*

THE CHAMPION

Authorities.—Lawrence (*Ephialtes choliba*), Ann. Lyc. Nat. Hist. N. Y., vol. vi., 1853, p. 4 (Sacramento); *Brewster*, Bull. Nutt. Orn. Club, vol. vii., 1882, p. 31 (orig. desc.; type locality, Nicasio); *Bendire*, Life Hist. N. Am. Birds, vol. i., 1892, p. 361; *Emerson*, Condor, vol. viii., 1906, p. 29 (red phase); *Swarth*, Condor, vol. xvii., 1915, p. 167 (Eureka; crit.), *Bonnot*, Condor, vol. xxiv., pp. 30, 31 (voice.)

No. 216c Sahuaro Screech Owl

A. O. U. No. 373f. **Otus asio gilmani** Swarth.

Synonyms.—Arizona Screech Owl. Formerly called Mexican Screech Owl.

Description.—*Adult:* Somewhat similar to *O. a. bendirei*, but much paler and grayer,—ashy gray tone sustained nearly throughout; under plumage heavily and finely mottled gray (with customary black streaks); the upper plumage slightly rufescent; the disc-feathers of throat somewhat modified, those of the middle broadly black-ribbed, those of the side with rib suppressed distally, and sharply cross-barred instead. Length of adults: 190.5-228.6 (7.50-9.00); male: wing 152.6 (6.01); tail 76.5 (3.01); bill from cere 12.9 (.51); female: wing 156.5 (6.16); tail 75.1 (2.96); bill 13.5 (.53).

Remarks.—This form represents the extreme in another line of divergence from *O. a. nævius*, viz., the *maxwelliæ-aikeni-gilmani* group. There is a hiatus between its range and that of *bendirei* (or *quercinus* Grinnell), and there is no suspicion of intergrading between them.

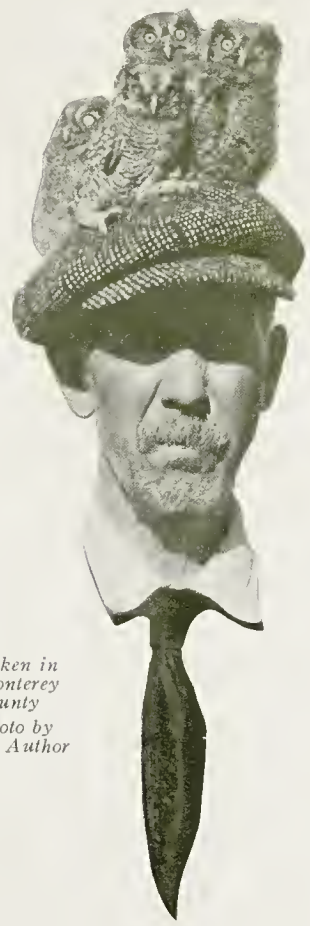
This also is known as a monochromatic form, i. e., it has no recognized rufescent phase; but a specimen taken by Dr. Cooper at Ft. Mohave on the Colorado River in 1861 (Mus. Vert. Zool. No. 4395) is decidedly warm in tone throughout, possibly the effect of fading.

Recognition Marks.—As in preceding—lighter and grayer.

Range of *O. a. gilmani.*—Southwestern California, southern Arizona, and southwestern New Mexico (presumably also northern Sonora).

Occurrence in California.—Resident in the valley of the lower Colorado River and probably also in the Imperial Valley.

Authorities.—**H. Brown** (*Megascops asio cineraceus*), Condor, vol. vi., 1904, p. 46 (Colo. Valley, on Calif. side); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 128 (Colo. Valley); *Gilman*, Condor, vol. xi., 1909, p. 147 (Ariz.; desc. nests; habits, etc.); *Swarth*, Condor, vol. xviii., 1916, p. 163 (crit., desc., meas.).



Taken in Monterey County
Photo by the Author

ALL ABOARD!

TO ONE whose early studies have been conducted in the forests and deciduous groves of the East it is a disappointment to learn that the birds of California will not respond to the Screech Owl cry. Why, go out in any grove from Iowa to Massachusetts, at any time of year, at any hour of daylight, save the siesta interval from 10 a. m. to 2 p. m., secrete yourself in a thicket and simulate the mournful, rolling call of the little Screech Owl, and you will at once be conscious of an apprehensive hush in the neighboring trees and bushes. Then follows a murmur of inquiry; Chickadees, Titmice, Nuthatches, Warblers, Vireos, and Jays set out to discover the whereabouts of this arch-enemy who has been indiscreet enough to proclaim his presence during the hours of his helplessness. If a veritable Owl is found, as not infrequently happens, every bird's bill is against him, and there is none so poor to do him reverence—by daylight. This is not alone because he appears stupid and sleepy, or because he regards his tormentors with the fixed gravity of a round-eyed gaze, varied only by "that forlorn, almost despairing wink" peculiar to it, but because they have an ancient and well-grounded grudge against this bird of silent wing and cruel claw. All but the Blue Jay (*Cyanocitta cristata*)—he is a villain himself, and he leads the persecution of Owls from a sheer love of mischief. Whenever a Blue Jay's voice is lifted high, and there is an undercurrent of bird-babble beneath it, it is time for the bird-man to slip rapidly forward from tree to tree and investigate.

But there is none of that here, nor indeed anywhere in the West, so far as I have been able to discover. Why, we do not exactly know; but it may

not be amiss to speculate. In the first place, the bird is less tuneful—or less noisy—and so less in evidence in the West. The notes, too, are different, and, possibly, less terrifying, though terror with birds must be more a matter of remembered experience than of tone quality and suggestion in itself. Instead of that "tremulous quaver, exquisitely mournful and sweet," but also very gruesome, as it proceeds from the throat of a famished, bird-hunting Screech Owl in zero weather, we have in the California bird duller tones and a song phrase made up in its early numbers of separate and easily distinguishable notes. But also, chiefly, I think, the Screech Owls of the Pacific Coast, having in winter a more abundant and constant supply of their favorite food,—mice, beetles, frogs, and even, occasionally, fish—are not often driven to attack other birds. Tyler records an instance where a Screech Owl was chased by Mockingbirds; and, in general, it may be said that almost any bird will join in the pursuit of any night-prowling Owl. Even that most impeccable mouser, the Barn Owl, is sometimes set upon, in sport. But the key to the woods has been handed over to the Pygmy Owl, and him the small birds fear as they do not *Otus asio bendirei*.

Taken in San Diego

Photo by D. R. Dickey & L. Huey

SOUTHERN CALIFORNIA SCREECH OWL

It is only at nesting time that we can acquire anything more than the merest scrap of information about our Screech Owls. Early in April, or, rarely, in later March, some natural cavity in a tree, whether live oak, cottonwood, or sycamore, or else some deserted Woodpecker's nest, is selected for a home. Instances are found where the birds used old rat nests, and they are suspected of occupying old Magpie nests as well. No lining material is required, and the three or four rounded white eggs

are laid upon the rotten wood or chippings left by the last occupant. The female is a very close sitter, requiring to be lifted from the eggs, if incubation has progressed; while the male, when not actually sharing the nesting cavity with his mate, is usually to be found in some nearby cranny.

Mr. Benjamin F. Gault tells an amusing instance[1] of the Otine reluctance at leaving a happy home. The narrator had found in an old Flicker hole near Riverside, Illinois, a Screech Owl with four young. "The mother bird appeared dazed when brought to the light, and singularly enough in taking her from the nest the entire brood was also removed at the same time, she having instinctively grasped one of the young, that one another and so on until they all became attached, and they certainly presented a ludicrous sight as they came dangling out of the hole, each retaining a firm hold of the other; but the youngsters finally dropped off and tumbled to the ground."

Taken in Oregon *Photo by A. W. Anthony*

MACFARLANE SCREECH OWL

Incubation lasts about three weeks, and the young are blind when hatched. They are covered with a thick white down, like chickens; and like chickens, they will peep lustily if disturbed. Of course they are voracious eaters and so importunate in their demands, that the hard-working parents are required to lay up a

[1] Quoted by Bendire, Life Histories, Vol. I., p. 362.

Photo by A. W. Anthony

CAUGHT RED-HANDED

THE BIRD IS A MACFARLANE SCREECH OWL PHOTOGRAPHED IN THE BLUE MOUNTAINS OF OREGON

surplusage of food during the night which they dole out at intervals through the day. Although they grow very fast it is not until fifteen days after hatching, according to Otto Emerson, who studied a family closely at Haywards,[1] that they get their eyes fully open.

The Owls remain in a family group for some weeks after the young are able to leave the nest, and one occasionally comes across them standing as motionless as statues on some horizontal limb at a low level in the woods. When the young are beginning to make inquiries for themselves, or when family cares are quite done, the old birds, who, since the courting days have maintained a discreet silence, become tuneful—or noisy, according to the receptivity of the listener.

It is altogether probable that these Owls remain mated for life. Anyhow, the birds are discovered in pairs during the winter. Once in the "dead" of winter (how foolish that easternism sounds in California!), January 21, 1911, I was exploring the bottoms of the San Gabriel River in company with Mr. A. B. Howell, when we came to a cottonwood stub about 15 feet high which showed a ragged hole where some oölogist had once dug out a Flicker. Arrived at the top, I split the stump down gently and disclosed a Screech Owl crouching on the bottom. A fragment fell upon him, but he made no moan. Then I rent off the smaller half of the broken tree, capturing the bird without difficulty, and exposing as I did so another cavity below the one in which the Owl sat, and separated from it only by the thinnest septum of rotten wood. The floor of the upper cavity was covered to a depth of three inches with a loose mass of animal debris, decomposed casts, feathers, the tests of ants, etc.; and when the trunk

[1] Bendire, op. cit. p. 362.

was rent, quantities of this material fell down into the lower cavity. I mention this explicitly because it occurred to me, in descending, to thrust an exploratory hand into the accumulation of the lower cavity; and here, uncomplainingly buried, I dug up *another Owl*, the female. It was a shame to kill them, but Howell wanted the skins and each bird passed by the airless route to the land of Not, without a struggle, mild and innocent. As we handled the carcasses of the dead birds, curious big flat flies came forth, black fellows which had evidently been living a parasitic life upon these patient fowls.

No. 217

Flammulated Screech Owl

A. O. U. No. 374. **Otus flammeolus** (Kaup).

Synonyms.—Dwarf Screech Owl. Least Screech Owl.

Description.—*Adult:* (Average plumage based on four nearly uniform California (2) and Arizona (2) specimens). Plumicorns (ear-tufts) very short—scarcely noticeable. General tone of upperparts weathered wood-brown, produced by finely mottled whitish and dusky; facial disc not prominent, its included feathers chiefly dusky-and-white-barred; tawny washes or stains about eyes, base of bill, crown centrally, rim of facial disc (strongly, split on nape by grayish crescent), and vague semicircular broad band across upper back and anterior portion of wing, including the under surface and continued on sides of breast as prominent edging of larger stripes; bordering areas of head, especially the included band of cervix and underparts, lighter—whitish or pale ashy as to ground; the underparts heavily marked with "crawling insect" stripes and bars, after the fashion of *O. asio*, the more prominent figures heavily margined with deep tawny; a large V-shaped design of white and tawny on back, formed by outer webs of outer scapulars; and upperparts further varied by skeletonized central stripes of blackish; quills strongly indented with white and ochraceous on outer webs, obsoletely ochraceous-barred on inner. Bill and feet dark; *iris brown* (unique among owls). *Adult, gray phase:* With tawny (as in preceding description) more or less reduced; in extreme examples entirely wanting, save on scapulars. *Adult, red phase:* With increase of tawny throughout; extreme examples are cinnamon-brown above and strongly tinged with cinnamon-rufous on face and breast. As the red increases, the black tends to reduction or diffusion, being (according to Ridgway) sometimes entirely wanting on crown. *Nestlings:* Notably dark-colored, finely barred dusky and grayish white throughout, but especially on head and underparts; pattern of wings as in adult; and stains of ochraceous about bill, eyes, sides of neck, etc. *Length of adults:* 152.4-177.8 (6.00-7.00); wing 133 (5.24); tail 60 (2.36); bill from cere 9.5 (.37). Females a trifle larger.

Recognition Marks.—Sparrow size, but appearing larger; a tiny Screech Owl to appearance, but "horns" scarcely visible; V-shaped rufous bars on back; decidedly larger than Elf Owl

Nesting.—*Nest:* An old nesting hole of woodpecker, or natural cavity in tree. *Eggs:* 2 or 3; white, subspherical. Av. of 3 eggs from Arizona (Huachuca Mts.—Willard): 30.48 x 24.64 (1.20 x .97); index 81. Av. of 2 eggs from Utah (Wahsatch Mts.—Treganza): 27.1 x 21.08 (1.065 x .83); index 78. *Season:* About June 1st.

General Range.—Mountains of western North America from southern British Columbia to Guatemala.

Occurrence in California.—A little-known resident, reported from the mountains of Shasta County (Fort Crook), south, but chiefly in the San Bernardino Mountains.

Authorities.—**Cooper** (*Scops flammeola*), Orn. Calif., 1870, p. 422 (Ft. Crook); *Belding*, Proc. U. S. Nat. Mus., vol. v., 1883, p. 549 (Big Trees); *Grinnell*, Univ. Calif. Pub. Zool., vol. v., 1908, p. 59 (San Bernardino Mts.).

IF A MARTIAN in black livery were to sidle up on the dark side of our planet, all on a moonless night, to spy upon us, he could scarcely keep his business so well concealed as has this ghoulish avian mystery, the Flammulated Owl. Yet the Owl is no interloper, but a native son; for his race has probably told off more myriad moons in California than Piute or Digger or Hueneme. The first example of this species recognized in the United States was taken by Lieut. Feilner, a representative of the Smithsonian Institute, at Fort Crook, in this State, in 1860. So far as California is concerned, the record remained unique for a quarter of a century, when, in 1885, Mr. Frank Stephens took a second specimen in the foothills of the San Bernardino range. Since that date five or six occurrences have been recorded,—two in the central and northern Sierras, and the remaining three or four in the San Bernardinos. On the 4th of June, 1894, Mr. M. French Gilman took a set of two eggs of this kind, at an elevation of 7500 feet, on the slopes of San Gorgonio Peak; and it is not improbable that the Owl is of regular occurrence throughout the higher ranges of California.

The Flammulated Owl has been found nesting in the mountains of Arizona and Colorado, and a dozen sets or such a matter taken; but the parent birds have almost invariably been killed at sight after the kindly fashion of our cult, and little is known of the life history or psychology of this little, silent terror of the night. The eggs, three or four in number, are deposited in old Woodpecker holes, usually at moderate heights; and the female is such a close sitter that she requires to be lifted from the nest.

It was Mr. Frank C. Willard, that veteran oölogist and astute student of bird ways, who first called our attention to a peculiarity of this owl which places it in a class by itself. So far as known, the irides of all other Owls are yellow, presumably because this color best promotes the light-gathering faculty, which is furthered by the facial disk and other

FLAMMULATED SCREECH OWL

devices. But the iris of the Flammulated Owl is of a dark chocolate brown, imparting to the bird a curious, mild expression entirely at variance with Otian traditions. Whether this color operates as a handicap in hunting, we cannot say; but it does increase our desire to know more about this avian sphinx.

Of the most recent recorded occurrence, Grinnell says:[1] "On the evening of July 15, 1905, at Bluff Lake, I obtained an adult male of this rare species. During the preceding two evenings we had repeatedly heard a peculiar note, different from that of any other owl we had ever heard. It consisted of a single mellow 'whoot,' repeated at regular intervals, something like the call note of the Phainopepla in this respect. These notes began to be heard at early dusk, by seven o'clock; but on account of their ventriloquial quality, gave little clue as to distance. Although far reaching, the notes proved to have been uttered close at hand."

No. 218

Horned Owl

No. 218a California Horned Owl

A. O. U. No. 375d. **Bubo virginianus pacificus** Cassin.

Synonyms.—Pacific Horned Owl. Hoot Owl, par excellence. Cat Owl.

Description.—*Adult:* Ear-tufts conspicuous, two inches or more in length, black, bordered with ochraceous; entire upperparts dusky or blackish, finely barred and mottled with prevailing whitish and ochraceous, the latter color predominant on each feather basally; wing-quills and tail faintly broad-barred; facial disc ochraceous, sharply bordered by blackish laterally, feathers whitish and black-tipped centrally, borders before and over eye blackish; a broad white space on chest; feathers of remaining underparts tawny or ochraceous tawny at base, changing to white on terminal portions (in very variable amount), finely and heavily barred with dusky brown; the sides of breast spotted with the same color; the toes pale tawny, nearly immaculate; iris bright yellow. Bill and toe-nails bluish black. *Young:* Above and below ochraceous, barred with dusky. *Chicks* are covered with white down. Measurements, av. of 4 males: Length (skins): 514.35 (20.25); wing 342 (13.47); tail 210 (8.27); bill from cere 26.1 (1.03). Av. of 6 females: Length 557.53 (21.95); wing 366 (14.41); tail 236 (9.29); bill from cere 28.1 (1.11).

Remarks.—This is the prevailing form throughout California, save in the humid coastal belt and the arid southeast. Ridgway, following Oberholser, has recognized a southern coastal form, *B. v. icelus*, from the "coast of California from about Latitude 35 north, to the San Francisco Bay district," but the distinction is clearly based on insufficient material. The influence of *saturatus*, that is, the darkening tendency, is felt all the way down the coast, but specimens from the southern humid coast belt can be duplicated by specimens from the San Bernardinos, and there is no constant difference, as alleged.

Recognition Marks.—Largest except for the two rare species, *Scotiaptex n. nebulosa* and *Nyctea nyctea*. "Horns" and size distinctive. Much darker than *B. v. pallescens;* lighter than *B. v. saturatus*.

[1] The Biota of the San Bernardino Mountains, p. 59.

Nesting.—*Nest:* A cranny or inaccessible ledge of cliff, or a deserted nest of Swainson Hawk, Western Redtail, Yellow-billed Magpie, or Western Crow; indifferently lined, or not, with a few bark-strips, grass-tufts, and feathers. Rarely in hollow trees. *Eggs:* 2 or 3, rarely 4; rounded ovate, white, lusterless, granular. Av. of 36 specimens from San Luis Obispo County in the M. C. O. colls.: 53.3 x 43.9 (2.10 x 1.73); index 82. *Season:* February–April; one brood.

Range of *Bubo virginianus.*—The Americas, except Amazonia.

Range of *B. v. pacificus* (chiefly contained within California).—California, except the southeastern portion, the humid coastal strip (narrowly) north of Latitude 35, and (possibly) the extreme northeastern portion, north into south-central Oregon, east to San Francisco Mountains, Arizona, south to northern Lower California.

Authorities.—Gambel (*Bubo virginianus*), Proc. Acad. Nat. Sci. Phila., vol. iii., 1846, p. 46 (Calif.); *Stone*, Auk, vol. xiii., 1896, p. 156 (s. Calif.; diagnosis); *Oberholser*, Proc. U. S. Nat. Mus., vol. xxvii., 1904, p. 183 (monogr.); *Miller*, Condor, vol. xii., 1910, p. 13 (fossil); *J. B. Dixon*, Condor, vol. xvi., 1914, p. 47, figs. (life hist.; Escondido).

No. 218b Desert Horned Owl

A. O. U. No. 375a. **Bubo virginianus pallescens** Stone.

Synonyms.—Western Horned Owl. Pallid Horned Owl.

Description.—*Adult:* Similar to *B. v. pacificus*, but much paler, the ochraceous tawny element largely replaced by white, sometimes nearly wanting below, the barring of underparts usually narrower and finer. Adult male: wing 341 (13.43); tail 215.9 (8.50); bill from cere 27.3 (1.07). Adult female: wing 362.8 (14.28); tail 222 (8.74); bill from cere 29 (1.14).

Remarks.—This is a clearly marked bleached form, well established in the arid Southwest. Although the range of *B. v. pacificus* is said to overlap that of *pallescens* (in the San Francisco Mts.), there is very little evidence of gradation within the limits of California.

Recognition Marks.—As in preceding form; much lighter.

Range of *B. v. pallescens.*—The southwestern United States from central Texas west to southeastern California and northwestern Lower California, south into northern Mexico.

Distribution in California.—Resident along the Colorado River, in the Imperial Valley, and in wooded portions of the Colorado and Mohave Deserts. To a limited degree also in the desert ranges.

Authorities.—Baird (*Bubo virginianus*), Rep. Pac. R. R. Surv., vol. ix., 1858, p. 49, part (Colo. River, Calif.); *Oberholser*, Proc. U. S. Nat. Mus., vol. xxvii., 1904, p. 182 (monogr.); *J. Mailliard and J. Grinnell*, Condor, vol. vii., 1905, p. 74 (Victorville; food); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 129 (Colo. Valley).

No. 218c Western Horned Owl

A. O. U. No. 375a, part. **Bubo virginianus occidentalis** Stone.

Description.—*Adult:* Similar to *B. v. pallescens*, but larger and averaging darker in coloration. *Adult male:* wing 349.6 (13.76); tail 212.8 (8.38); bill from cere 27.1 (1.07). *Female:* wing 376 (14.80); tail 230.5 (9.07); bill 30.2 (1.19).

Range of *B. v. occidentalis.*—Central western United States from Kansas and Minnesota west to northwestern California and north to central Alberta.

Occurrence in California.—Recorded sparingly from the northeastern plateau district, probably the resident form.

Authorities.—Swarth, Condor, vol. xxiii., 1921, p. 136 (Shumway, Lassen Co.); *Oberholser*, Proc. U. S. Nat. Mus., vol. xxvii., 1904, p. 191 (monogr.).

No. 218d Dusky Horned Owl

A. O. U. No. 375c. **Bubo virginianus saturatus** Ridgway.

Description.—*Adult:* Similar to *B. v. pacificus*, but larger and darker; the dusky of upper plumage more extensive, the tawny somewhat reduced; underparts much darker, the ground-color (except area of breast) often entirely tawny, the dusky markings heavier, sometimes nearly confluent; the toes usually mottled, sometimes prevailingly dusky. *Adult male:* length 542.3 (21.35); wing 348.3 (13.71); tail 212.3 (8.36); bill 28.9 (1.14). Adult female: length 593.1 (23.35); wing 374.7 (14.75); tail 227.2 (8.95); bill from cere 30 (1.18).

Remarks.—A strongly marked form from the northern coast belt whose influence is felt as far south as Monterey, prevailingly to San Francisco Bay region. A typical example of the darkening, "saturating," influence of humidity.

Recognition Marks.—As in *B. v. pacificus;* larger, darker.

Range of *B. v. saturatus.*—Pacific Coast district from southern Alaska to south central California.

Distribution in California.—Resident in the humid coastal strip, broadly defined at the north and including the San Franciscan embayment, narrowly defined in the southern reaches to about the southern border of San Luis Obispo County. "Probably of casual occurrence in the central Sierras" (Grinnell).

Authorities.—Vigors (*Bubo virginianus*), Zool. Voy. "Blossom," 1839, p. 15 (San Francisco); *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 73 (status in Calif.).

BY A FANTASTIC quirk of history the grizzly bear (*Ursus horribilis*) has become the emblem of California. In justification of this early whim, we can only urge that the bear is enthusiastic in welcome and gets an everlasting grip upon the stranger who ventures within her borders. In presenting *Bubo horribilis*, the grizzly bear of the bird world, we shall not be able to offer anything beyond the above named characteristics in his favor. He loves the darkness because his deeds are evil; and after the protecting sun has set, woe betide the mole or rabbit, Partridge, Jay, or Chanticleer, who dares to stir where this monster is a-wing. When captured in a trap, as he sometimes is by aggrieved poultry fanciers, the ruffling of the feathers, the alternate hissing and fierce snapping of the mandibles, and the greenish yellow light which comes flashing from the great saucer eyes, all give fair warning of what one may expect from the free foot once it gets a chance to close upon a victim.

Horned Owls in a state of nature do not pose for inspection unless forcibly detained. A steel trap is, of course, the surest method of detention, but a mob of Blue-fronted Jays ranks a close second. Nothing can exceed the joy of the Jay upon the discovery of one of these grim death's

Taken in Washington *Photo by L. D. Lindsley*
DUSKY HORNED OWL IN TRAP

heads secreted in the depths of a fir tree. Here is a day's sport cut out for one whose "sportin' blood" runs high on week-days and turns feverish on owl days. The whole Jay countryside is aroused. To the number of a score they gather about the victim and throw all his sins up to him in a chorus of Billingsgate. The Owl beams hate at them, snaps his mandibles fiercely, and makes now and then an ineffectual dab at his pursuers, which only seems to arouse fresh shrieks of laughter. When the din becomes unbearable, he may dash from cover, but the Jays surround him at the

next resting place, screaming sarcastic apologies for their past rudeness, and promising redoubled misbehavior.

One wonders that they dare do it, for the sullen object of mirth will assuredly wreak vengeance on them when his turn comes in the first watch of the night. It is difficult to exaggerate the rapacity of these freebooters. An observer in New York State, speaking, of course, of the eastern form, "states that in a nest he examined, containing two young Owls, he found the following animals: a mouse, a young muskrat, two eels, four bullheads, a Woodcock, four Ruffed Grouse, one rabbit, and eleven rats. The food taken out of the nest weighed almost eighteen pounds. A curious fact connected with these captives was that the heads were eaten off, the bodies being untouched."[1] The brain of the victim is counted the tid-bit, and in seasons of plenty the bird will have nothing else. Thus, while the Owl probably will not kill wantonly, it is notoriously wasteful, and the coarser portions of these choice viands of which we read, these bloody offerings to the infant Dinops, are removed periodically from the nest.

Taken in Los Angeles County *Photo by W. M. Pierce*
EGGS OF PACIFIC HORNED OWL ON LEDGE OF CLIFF

While a certain amount of "good" is undeniably accomplished by the Horned Owl in preying upon rats and gophers, it is more than offset by the relentless attacks upon birds, especially upon meadowlarks, quails, and grouse, and

[1] Bendire, Life Histories, N. A Birds, Vol. I., p. 382.

by the frequent, although not regular, depredations upon poultry. Other predatory species are not exempt, either. Crows and Jays are frequent victims, and Screech Owl appears to be a regular item on the Bubonine bill of fare. Mr. Bowles relates, also, that during the fall and winter months on certain shooting preserves these birds make a thorough search every night for wounded ducks. So successful are they that out of hundreds that are wounded and lost by sportsmen, it is unusual to find one; while well picked carcasses are common.

Taken near San Diego *Photo by L. Huey and D. R. Dickey*

PACIFIC HORNED OWL ON NEST

A government expert who has given great attention to the food of hawks and owls summarizes thus:[1] "The Great Horned Owl does a vast amount of good and if farmers would shut up their chickens at night instead of allowing them to roost in trees and other exposed places, the principal damage done by this bird would be prevented." From this hopeful conclusion I find myself obliged to dissent, for I have yet to find the nest of your Horned Owls which does not bear testimony to persistent and outrageous depredations upon the bird world.

Horned Owls, too, are of commoner occurrence than is sometimes realized. Although normally bold and aggressive, the birds soon learn caution, and because their local attachments are very strong, they will forego the pleasure of song rather than desert the ancestral haunts. Where danger has not taught discretion, they are quite free with their nocturnal concerts; but they are known to nest in places where a single full-voiced *hoot* would draw the fire of the countryside. The mating song (save the mark!) is a succession of resonant bellowings in a single key—*Whoo, whoo, hoo-hoo, who*—quite variable as to length and form. Besides this the bird occasionally indulges in sepulchral laughter, *hoo hoo hoo hoo*

[1] U. S. Dept. of Ag. Biol. Surv. Circular No. 61, p. 16.

hoo hoo hoo, which arouses anything but mirthful feelings in the listener.

But these modest notes by no means exhaust the Horned Owl's repertory. As a young man, in Tacoma, the writer once lived in a house which immediately adjoined a large wooden church. My chamber window looked upon a flat kitchen roof, through which projected a brick chimney some ten feet away. At three o'clock one morning a horrible nightmare gave way to a still more horrible waking. Murder most foul was being committed on the roof just outside the open window, and the shrieks of the victims (at least seven of them!) were drowned by the imprecations of the attacking party—fire-eating pirates to the number of a dozen. Pandemonium reigned and my bones were liquid with fright—when suddenly the tumult ceased; nor could I imagine through a whole sick day what had been the occasion of the terrifying visitation. But two weeks later the conflict was renewed,—at a merciful distance this time. Peering out into the moonlight I beheld one of these Owls perched upon the chimney of the church hard by, gibbering and shrieking like one possessed. Cat-calls, groans, and demoniacal laughter were varied by wails and screeches, as of souls in torment—an occasion most memorable. The previous serenade had evidently been rendered from the kitchen chimney,—and I pray never to hear its equal.

The early nesting of the Horned Owl is the marvel of those eastern states whose Februaries are given over to blizzards instead of roses. Fresh eggs have been taken in early February, with zero temperatures prevailing, from nests wherein all but the sitting bird was encrusted with snow. Here in California, where temperature cuts so little figure in nesting calculations, the Horned Owls hold pretty much to the ancient habit. February and March are the usual nesting months, and January 29th (1911) at Escondido is the earliest date I can discover. These Owls never build nests of their own, in the strict sense, but either occupy some deserted nest of Redtail, Magpie, or Crow, or else make shift with the natural opening of some ledge or cliff cranny or steep hillside. Shelter is a minor consideration, since the bird fears neither storm nor prowling coyote; but some degree of elevation, a commanding lookout, is the prime requisite. The nesting hollow, whether of sticks or of earth, is lined casually with feathers from the bird's breast. And in this depression two, sometimes three, or, very rarely, four, white eggs are laid. These are subspherical in shape; in size about that of hens' eggs, notably small for the bulk of the bird; and they require the services of the mother for something over four weeks. During the period of incubation the male is in close attendance, feeding his mate faithfully upon the nest and keeping a sharp lookout for intruders.

When disturbed, the owners pose in various attitudes, grotesque

or frightful, snapping their mandibles, and groaning now and then in a most dismal fashion. If the young are well grown, it is not at all safe to venture near, for an irate Horned Owl is incredibly swift in attack, and a raking shot from those powerful talons will leave at best a very sore head. One ardent investigator,[1] presuming too much upon an acquaintance of two years' standing, attempted to remove the owlets from a nest for photographic purposes. The blood flowing from three scalp wounds was soon staunched and he recovered his cap from a tree top a hundred yards away, "a punctured souvenir of our last intimate contact with the local Horned Owls."

No. 219

Snowy Owl

A. O. U. No. 376. **Nyctea nyctea** (Linnæus).

Description.—*Adult male:* Without plumicorns; entire plumage pure white, sometimes almost unmarked, but usually more or less spotted, or indistinctly barred above with pale brownish or fuscous,—perhaps heaviest on middle of back and wing-coverts; wing-quills and tail-feathers irregularly and sparingly spotted with dusky; below still fainter indications of dusky barring; legs and feet immaculate, heavily feathered. Bill and claws black; iris yellow. *Adult female:* Similar to male, but much more heavily barred with brownish black—only face, forebreast and feet unmarked; top of head and hind-neck spotted with dusky. *Young:* Uniform brownish dusky or sooty gray. Length of adult male (measured from tip of bill over head to end of tail): 635-685.8 (25.00-27.00); wing 410 (16.14); tail 230 (9.06); bill from cere 25.7 (1.02). Adult female, length 685.8-762 (27.00-30.00); wing 445 (17.52); tail 250 (9.85); bill from cere 27.5 (1.08).

Recognition Marks.—Brant to eagle size; pure or nearly pure white plumage.

Nesting.—Does not breed in California. *Nest:* A hollow in the ground, scantily lined with moss or grass and feathers. *Eggs:* 3 to 10, usually 5 to 7; oval, white. Av. size 57 x 45 (2.44 x 1.77); index 80.

General Range.—Northern portion of Northern Hemisphere. In North America breeds chiefly on the barren grounds from the Yukon Delta, central Mackenzie, and northern Ungava, north to high latitudes. Winters regularly south from the Arctic Circle to southern Canadian provinces, and sporadically into the northern central states, and straggles even to California, Texas, Louisiana, and North Carolina; and casually to Bermuda (3 records).

Occurrence in California.—Rare and sporadic visitor in winter. Two invasions recorded in recent years: that of 1896 reaching to Sonoma and Alameda counties, or possibly Santa Cruz (*fide* Thompson); that of 1916 reaching Del Norte (Nov. 1, spec. in M. C. O. coll.) and Humboldt counties.

Authorities.—**Cohen,** Osprey, vol. i., 1897, p. 71 (Alameda, Sonoma, and Humboldt counties, Dec., 1896); *Thompson*, Condor, vol. iii., 1901, p. 141 (Santa Cruz); *Smith*, Condor, vol. xix., 1917, p. 24 (Humboldt Co., Nov., 1916); *Bryant*, Calif. Fish and Game, vol. iii., 1917, p. 37 (n. Calif.; winter 1916-17).

[1] Chas. R. Keyes. See Condor, Vol. XIII., Jan., 1911, p. 17.

STRAGGLERS of this species are occasionally reported from any of the northern tier of states in winter, but it is only upon the occasion of widely concerted movement that general attention is drawn to their presence. Such an extended flight occurred in the East in the winter of 1901-2, when information of the capture of more than four hundred specimens was compiled by Mr. Ruthven Deane. The last general movement in the Pacific Northwest occurred in the winter of 1896-7, and it was this invasion which supplied us with our first explicit records of the bird's occurrence in California. A specimen was taken near Alameda on the 2nd of December, 1896, and three were shot in Sonoma County at about the same time. A correspondent of the San Francisco Chronicle, under date of December 8, reported the occurrence of Snowy Owls "in flocks" in Humboldt County.

Another movement, less extensive, was noted in the winter of 1916-17; and a specimen, an adult female, taken November 1st, 1916, in Del Norte County by Wesley Cooper, and prepared by C. I. Clay, of Eureka, is now in the M. C. O. collection. There is even a Santa Cruz record, of uncertain date, and we may suppose that other such occurrences have only escaped record.

No opportunity is ever lost of killing one of these handsome mid-winter visitors; and one might suppose, from the number of specimens which adorn store windows and taxidermists' shops, that the bird is much more common than it really is.

"The home of the Snowy Owl is on the immense moss- and lichen-covered tundras of the boreal regions, where it leads an easy existence and finds an abundant supply of food during the short Arctic summers. It hunts its prey at all hours and subsists principally upon the lemming, and it is said to be always abundant wherever these mammals are found in any numbers. Small rodents are also caught, as well as Ptarmigan, Ducks, and other water fowl, and even the Arctic hare, an animal fully as heavy again as these Owls, is said to be successfully attacked and killed by them" (Bendire).

No. 220

Burrowing Owl

A. O. U. No. 378. **Speotyto cunicularia hypogæa** (Bonaparte).

Synonyms.—Ground Owl. Billy Owl. Cuckoo Owl. Snake Owl.

Description.—*Adults:* Above dull grayish brown (wood-brown, bister, or warm sepia), heavily spotted and commingled with white or pale ochraceous-buff, the spots paired on the larger feathers and defined by adjacent dusky areas, the paired spots enlarged and dissociated toward base of remiges and rectrices; tail thus irregularly

BURROWING OWLS

six- or seven-barred; extreme forehead, ill-defined superciliary stripe, and throat, broadly, white; jugulum crossed by mottled band of brown and white, beneath which a pectoral semilune of white; remaining underparts white or pale ochraceous-buff, heavily barred, save on lower belly and crissum, with brown and brownish dusky; lining of wings chiefly pale ochraceous. The plumage is very variable both in the shade of brown and in the amount of white admixed, some specimens appearing nearly white on the head and upper back. Bill bluish dusky, changing to yellow on ridge and tip; iris lemon-yellow; claws black. *Young birds* are less spotted above, on head and back nearly uniform grayish brown, and are unmarked below save on jugular band. *Chicks* are covered with white down. Length 241.3 (9.50); wing 171.5 (6.75); tail 81.3 (3.20); bill from cere 14 (.55); tarsus 44 (1.73).

Recognition Marks.—Robin size, but appearing much larger; terrestrial habits; head without plumicorns; *light* grayish brown coloration.

Nesting.— *Nest:* At end of underground burrow, 4 to 10 feet in length, usually a mere cushion of dried horse-dung, occasionally with admixture of feathers and other soft substances. *Eggs:* 5 to 11; white, subspherical, highly glossed. Av. size 31.8 x 25.4 (1.25 x 1.00). *Season:* April 20–May 20; one brood.

Range of *Speotyto cunicularia.*—Treeless portions of the western United States and adjoining British Provinces, south to southern South America.

Range of *S. c. hypogæa.*—Western North America from Puget Sound (locally), central British Columbia, southern Saskatchewan, and southwestern Manitoba, south to Panama, and from the Pacific Coast (exclusive of the humid strip) with most of the adjacent islands, east to central Nebraska, Kansas, and southeastern Louisiana. Migratory from the northern portions of its range.

Distribution in California.—Common resident in the treeless portions of the State up to the Transition zone. Not found in the humid coastal strip above Marin County, nor on the rocky desert ranges. Occurs regularly upon the islands from the Farallons south. Numbers undoubtedly augmented in winter by migrants from the North.

Authorities.—Gambel (*Athene socialis*), Proc. Acad. Nat. Sci. Phila., vol. iii., 1846, p. 47 (Calif.; crit., habits, voice); *Coues*, Birds of the Northwest, 1874, p. 321 (syn., desc. habits, etc.); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 51 (San Joaquin Valley; habits, etc.); *C. A. Wood*, Contr. to Med. and Biol. Research, 1919, p. 818 (eye structure).

"BILLY OWL" is the humorous and half affectionate name bestowed by all good Californians upon this familiar sprite of the roadside, this authentic genius of open spaces. Like an elfin sentry the bird challenges from his earthen mound, denounces us valorously as trespassers, and then either dives ignominiously below or flees to some distant sage top. Or, if he holds his own at the mouth of the home burrow, he bows and clucks in a fashion which is eccentric rather than polite. Of the bird's absurd appearance Coues has testified in a memorable passage:[1]

"Their figure is peculiar with their long legs and short tail; the element of the grotesque is never wanting; it is hard to say whether they look most ludicrous as they stand stiffly erect and motionless, or when they suddenly turn tail to duck into a hole, or when engaged in their various antics. Bolt upright on what may be imagined their rostrum, they gaze about with a bland and self-satisfied, but earnest air, as if about to address an audience upon a subject of great pith and moment. They suddenly bow low with profound gravity, and rising as abruptly, they begin to twitch their face and roll their eyes about in the most mysterious manner, gesticulating wildly, every now and then bending forward till the breast almost touches the ground, to propound the argument with more telling effect. Then they face about to address the rear, that all alike may feel the force of their logic; they draw themselves up to their

[1] Birds of the Northwest, 1874, pp. 326-7.

fullest height, outwardly calm and self-contained, pausing in the discourse to note its effect upon the audience, and collect their wits for the next rhetorical flourish. And no distant likeness between these frothy orators and others is found in the celerity with which they subside and seek their holes on the slightest intimation of danger."

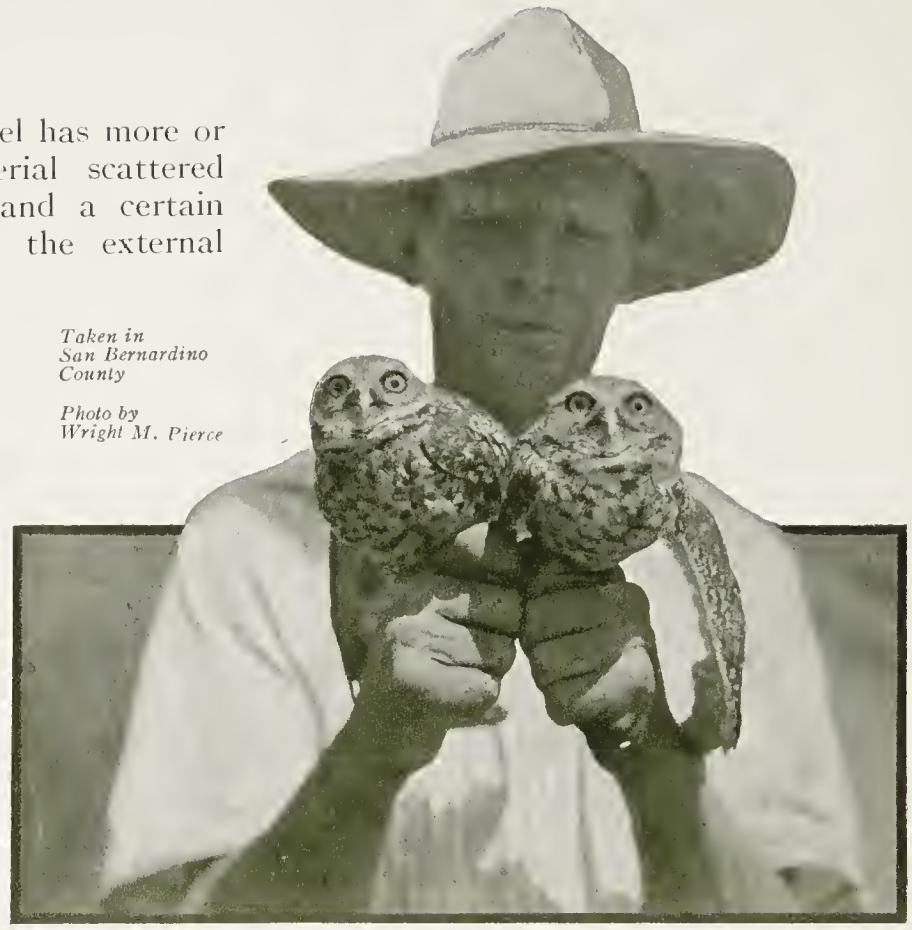
These curious Owls are alone among the northern land birds in the choice of subterranean dwellings. On the Great Plains they avail themselves largely of deserted prairie dog holes, but in California their choice falls oftenest upon the burrows of the ever present ground squirrels (*Citellus sp.*). Badger holes are also great favorites, but no offering of the lesser rodents is despised. It is probable that the Burrowing Owl does not originate its burrow, although in the case of the smaller rodents the tunnels require to be enlarged. This the bird does, not with its beak, but with its powerful claws, loosening the dirt and kicking it backward by successive stages, until it is ejected at the entrance. A typical burrow may descend sharply three or four feet, then turn and pursue a slightly ascending course until an ample nesting chamber, a foot or more in width and six inches deep, is reached. Some tunnels are much more extended. Tyler, in Fresno County, followed one for eighteen feet, and was rewarded by a single egg —not to mention fleas.

Taken in San Bernardino County *Photo by Pierce*

THE BURROW

The nesting cavity is heavily lined with dried horse dung, torn to feathery shreds and

spaced evenly. The tunnel has more or less of the same material scattered throughout its length, and a certain amount distributed over the external mound is a necessary evidence of occupation. This is the approved form of upholstery, but some naughty birds near Dos Palos are indulging a more expensive fancy. Here, in three instances, we found tunnels lined copiously with wings of the Black Tern (*Hydrochelidon nigra surinamensis*), and no less than a dozen pairs of these gruesome mementoes scattered about each front yard. This habit is doubtless quite exceptional, and due to the special temptations of the immediate neighborhood. One need not kill these Owls to learn what else they feed upon, for half-eaten mice, dismembered frogs and headless snakes litter the floor, and invite the offices of the far-venturing blow-fly. Fleas usually abound; and altogether the nuptial chamber of this doughty troglodyte is not an inviting place.



Taken in San Bernardino County

Photo by Wright M. Pierce

A PAIR OF BURROWING OWLS

From six to eleven young are raised in a single brood; and when we consider that the adults themselves require more than their own weight of animal food daily, we begin to form some conception of the economic importance of these birds. Their food includes all the baneful rout of rodents, and they are able to kill ground squirrels of a size equal to their own. Besides these, lizards, frogs, snakes, and even small fish, are captured. Grasshoppers and crickets, as well as beetles of many sorts, are staple food, and for these the bird hunts by day as well as by night. In the pursuit of prey, however, the birds become much more active at sunset, when they may be seen flitting about on noiseless wing, or else hovering in mid air above a suspected spot, after the well known fashion of the Sparrow Hawk. Small game is snatched from the ground without lighting, but in capturing a ground squirrel, the bird first plants his talons

in the back, then breaks the creature's neck by sharp quick blows of the beak. Soberly regarding the special claims of the hay rancher and grain-grower, I should say that, save the Barn Owl only, the Burrowing Owl is his best ally among birds, and that he who wantonly destroys one should be classed with the man who tramples a field of grain or sets fire to a haystack.

Whenever food is plenty and the ground inviting, Burrowing Owls are likely to form little colonies, ten or a dozen pairs being found in a stretch of two or three acres. They appear to be peaceably disposed toward each other, and mates are notably faithful. Upon the advent of spring, or say in the early days of March, one may hear at evening a soft and mellow love song, *coo coo-oo, coo coo-oo*, which the male repeats by the hour. This sound, which our English friends declare reminds them strikingly of the old world cuckoo (*Cuculus canorus* Linn.), requires to be carefully distinguished from that of our own Road-runner (*Geococcyx californianus*). It is perhaps more sprightly and thinner in quality than that of the love-lorn chaparral cock, but the resemblance is very close. Besides this engaging love note, the Burrowing Owl indulges the strongly contrasting clattering cries already referred to. This excited clacking serves not only to exorcise invaders in time of danger, but to voice various emotions, notably those which arise at early evening in pursuit of the chase. I have even suspected that it was a sort of hunting song, a due notice to all imprudent moles, akin to the awful serenade with which the Mountain Lion terrorizes his prey. Be this as it may, the reverberating *clack—clack—clack clack clack*, sounding from field to field, serves to identify the twilight hours as *Speotyto*'s own.

The Burrowing Owl enjoys an almost unbroken distribution throughout the treeless or lightly timbered sections of the State, from the base of the Sierras down to the ocean's edge. Indeed, it does more than this, for it is one of the characteristic birds of the Santa Barbara Islands and those of the coast of Lower California. In such situations it is impossible to believe that the lesser sea-fowl—petrels and auklets—do not furnish their quota of this bird's fare. In 1911 I found a single Owl on the flat below the siren on the S. E. Farallon, a very darkling bird, soiled, perhaps, by much searching of cinder heaps. I was told that several pairs had formerly bred there, but that they had been shot off because of their persecution of the smaller migrants. On the other hand, Brown, who found them abundant on Guadalupe Island, examined a nest which contained, as provision for five youngsters, only eighteen freshly killed mice, besides remains of countless others. Burrowing Owls do not thrive upon the desert, nor at Lower Sonoran levels generally, although they may be found under exceptional circumstances. Although civilization and at-

tendant cultivation bear hard upon them, yet they are able to maintain themselves in out-of-the-way places, and in the shelter of fence rows. Squirrel poison claims occasional victims, especially the bisulphide variety; and the Owls will disappear from sections where poison is persistently used.

Taken in Oregon *Photo by Finley & Bohlman*

BROTHERS

For Younger Readers

IF YOU WERE A BIRD I don't believe you'd want to live in a hole in the ground, would you? It's warm there, no doubt, but it must be stuffy and dark; and oh! supposing it should rain too much at once! But this bird likes it. He was brought up that way, and he doesn't know any better. We call him the Billy Owl because, because—well, now, I don't know just why we do call him the Billy Owl, but I guess it's because he is so funny. When he hears us children coming, no matter how quietly, he scrambles up out of his hole

to greet us. Somehow he seems to be very much excited and he'll bow and scrape and say "How d'ye do?" over and over again. And then he'll turn around and say "How d'ye do?" backward; and then he'll say it frontward again. But he won't stay to shake hands. No, not he. Why? Because he's *afraid*. Think of that! And he doesn't need to be afraid, either, because he has finger-nails as sharp as pins; and if he did stay and shake hands—well, I'm glad he doesn't want to, that's all.

No, if we come too close, this funny, silly bird will fly away where we can't see him any more, or else he'll pop down into his hole again. If we had a spade we'd dig down and find him, but it would be a lot of work for daddy or somebody. If we could get down we would find Mrs. Burrowing Owl sitting on some round white eggs (oh, *almost* round, not quite) about as many eggs as you have fingers. And right beside Mrs. Owl would be a lot of cunning field mice (no, not live mice, but almost alive mice) that Billy had brought in for her to eat. And besides that there is, let me see, a part of a frog and a half-eaten snake and a—and a—oh, dear, I don't believe this is a nice place for us at all. Let's get out.

The farmer likes to have these Owls about his place, just because they catch mice and gophers. One Owl is better than two cats, just to catch mice; and, besides, you don't have to feed him milk. Perhaps that's why he catches mice all the time—because he has to.

This funny Billy Owl can be serious when he wants to, and he wants to be very serious at night in the springtime. Then he goes about singing *coo coo oo*, *coo oo oo*, in a sweet melancholy voice that makes the shivers go up and down your back—unless you happen to be a poet; and if you are, you say, "How perfectly beautiful!" And you mean it, too.

But I want to tell you about Billy Owl's babies, the babies which hatch out of the round white eggs—for I think they are the most delightful and perfectly behaved children I ever saw. Of course when they are *tiny* babies they have to stay down in the ground with their mama. But when they get big enough to walk, then Billy takes them out for an airing—one, two, three, four, five, six, seven, eight, nine, ten! My! the ground is just boiling over with Owl babies.

Billy has to count them off on his toes twice to be sure they are all there. Then they set out for a walk, while mama stands and watches them from the door. They learn to catch crickets, and they watch the big saucy grasshoppers as they spring up into the air and crack their heels together twice. Billy catches one and divides it between two of the children. Um! so good! And then they learn to turn over stones and meadow-cakes to look for beetles. But just then mother, on the lookout, cries, *Quant*, which means "Look out!" She sees a man coming on horseback. She does not know it is the bird-man who will not hurt her. Every owl chicken freezes, becoming as motionless as a stone. Then *quant quant*, which means "Come home," and every chick, obedient to the dot, turns and toddles toward that yawning friendly hole. How it happens, I do not know, but it is a fact that before the hole is reached a line has somehow been formed, with the youngest and smallest in the lead, and the biggest, whom we suppose to be the eldest sister, in the rear. Punctual to the second, not a peep of protest, not a chick remaining, in they go. One, two, three, four, five, six, seven, eight, nine, ten! Big sister plumps in last, then mother and father; and Billy's brood is safe.

But suppose the danger had been real. Suppose it had been a coyote instead of the bird-man. And suppose one of the owl babies had hung back and said, "Oh, I don't want to go home *yet*." Well, there would have been only *nine* little owlets to snuggle down in Billy's nest. That's all.

No. 221

Pygmy Owl

No. 221a California Pygmy Owl

A. O. U. No. 379a. **Glaucidium gnoma californicum** Sclater.

Synonym.—California Gnome Owl.

Description.—*Adult:* Upperparts warm brown ("deep broccoli brown to light bister or grayish snuff brown"—Ridgway), finely spotted with white or pale ochraceous buff—the spots are smallest, most numerous, and circular on head; fewest or wanting on upper back; larger, cordate or hastate on outer scapulars, wing-coverts and tertials; and everywhere obscurely shadowed by dusky; rounded white spots on outer webs of flight-feathers, ranging into bars; and tail crossed by seven ranks (counting concealed basal and terminal portions) of double spots; a narrow cervical collar of black and

California Pygmy Owl

About ⅔ life size

From a water-color painting by Major Allan Brooks

white shadowed by tawny; cheeks, sides, and a narrow band across jugulum, color of back or a little lighter, and similarly spotted; throat and central patch of breast below band pure white; remaining underparts white, coarsely streaked with sepia, the streaks tending to coalesce in stripes centrally. Bill and cere greenish yellow; feet dull yellow, with soles of bright chrome; claws yellow basally, blackening on tips; iris bright yellow. *Immature birds* are darker and redder brown above; the tone of the head is grayer, inclining to slaty, in decided contrast to back; spotting much reduced, nearly confined to forehead and wings. Length 152.4-190.5 (6.00-7.50); wing 93.6 (3.685); tail 65.9 (2.59); bill from cere 10.9 (.43). Female a little larger.

Recognition Marks.—Sparrow size; chunky appearance; carries tail at angle; more unicolored above than Flammulated Screech Owl, and sharply striped (instead of mottled) below; larger than Elf Owl.

Nesting.—*Eggs:* 3 or 4; short oval, white; laid in old woodpecker hole or, rarely, in natural cavity. Av. size 29.5 x 23.4 (1.16 x .92); index 80. *Season:* About June 1st; one brood.

Range of *Glaucidium gnoma.*—Western North America from southern British Columbia south to Guatemala.

Range of *G. g. californicum.*—The Pacific Coast states and southern British Columbia, except the humid coastal strip, east to northwestern Idaho.

Distribution in California.—Resident in timbered Upper Sonoran and Transition zones of the central and southern mountain systems. Intergrades with *grinnelli* in San Luis Obispo County and the Mt. Shasta region.

Authorities.—Heermann (*Athene infuscata*), Jour. Acad. Nat. Sci. Phila., ser. 2, ii., 1853, p. 260 (Calaveras R.); *Sclater*, Proc. Zool. Soc. London, 1857, p. 4 (orig. desc.; Calif.); *Bendire*, Life Hist. N. Am. Birds, vol. i., 1892, p. 403, part; *Sharp*, Condor, vol. ix., 1907, p. 87 (Escondido; desc. nest); *Swarth*, Condor, vol. xii., 1910, p. 109 (San Bernardino Mts.; desc. juv. and nest; food).

No. 221b Coast Pygmy Owl

A. O. U. No. 379a, part. **Glaucidium gnoma grinnelli** Ridgway.

Description.—"Similar to *G. g. californicum* but much browner, the general tone of upperparts varying from deep snuff brown to verona brown; spots on upperparts (especially those on pileum and hindneck) distinctly fulvous or rufescent"—Ridgway. Size not appreciably different.

Remarks.—A recently elaborated form in whose validity I have small faith. There is an undoubted tendency toward richer and darker coloring in all our coastal, especially humid coastal, forms, but the wonder is, in this case, that the tendency has been so stoutly resisted. Examples of this species from Puget Sound do, undoubtedly, average a little richer and darker than specimens from, say, the southern Sierras, yet I have before me a specimen from Seattle which is just perceptibly (say two vibrations to the million) darker than another from the Sierra Madre Mountains, with not enough of difference to found a quinquenomial on.

A "rufescent phase" has not been recognized in our Pacific forms, as it has in typical *G. g. gnoma;* but a specimen (Mus. Vert. Zool. No. 4396) of a bright brussels brown color, taken by Dr. Cooper in Marin Co., in 1873, is either such, or else an extraordinary example of the fading to which these owl-brown shades are liable.

Range of *G. g. grinnelli.*—The Pacific Coast district, broadly, from central California to southern British Columbia and Vancouver Island.

Distribution in California.—Resident in the humid coastal strip, broadly

defined, from Monterey northward, eastward north of the San Francisco Bay region, to include the inner coastal ranges.

Authorities.—Sclater (*Glaucidium californicum*), Proc. Zool. Soc. London, 1857, p. 126 (San Jose Valley); *W. A. Cooper*, Bull. Nutt. Orn. Club, vol. iv., 1879, p. 86 (Santa Cruz; desc. habits, nest and eggs); *Grinnell*, Auk, vol. xxx., 1913, p. 224 (measurements); *Ridgway*, Birds N. and M. Am., part vi., 1914, p. 791 (orig. desc.; type locality, Humboldt Bay).

No. 221c Rocky Mountain Pygmy Owl

A. O. U. No. 379, part. **Glaucidium gnoma pinicola** Nelson.

Description.—*Adults:* Similar to *G. g. californicum*, but grayer and general tone of the upperparts hair-brown or grayish hair-brown; streaks on underparts blacker. Dimensions not materially different.

Range of *G. g. pinicola.*—The Rocky Mountain district of the United States, from Arizona to Montana (and west in mountains to confines of *G. g. californicum*).

Occurrence in California.—An adult female taken by Dr. Grinnell in the Panamint Mountains is referred to this form.

Authorities.—Grinnell, Condor, vol. xx., 1918, p. 86 (Panamint Mts.).

SAVE to the few initiates, a meeting with this fascinating little fiend must come as a happy accident. Fiend he is from the top of his gory beak to the tips of his needle-like claws; but chances are you will forget his gory character at sight and call him "perfectly cunning," just because he is tiny and saucy and *dègagè*. Look your fill when fate brings him your way, for like the wind, his royal owlets flitteth where he listeth, and you cannot tell whence he comes nor whether he will come again this twelvemonth. When my moment of privilege came, this pocket edition of the powers that prey stood out boldly and unequivocally upon the topmost splinter of a wayside stub in a northern forest, and challenged attention. The gnome gave his back to the road, and now and then teetered his tail, which was otherwise set at a jaunty angle, nervously, as though there were something on his mind. But this preoccupation did not deter the Owl from bending an occasional sharp glance of scrutiny upon the birdman. Then all at once the bird whirled backward and launched himself, like a bolt from a crossbow, at a mouse some sixty feet away across the road. Seizing the "wee, timorous, cowerin' beastie" at the very entrance of his hole, the bird maintained its grasp upon it with both feet, and supported itself against the rodent's struggles by wings outstretched upon the ground. Not until the squeakings of the victim had quite ceased did the captor rise and disappear by rapid flight into the wood.

A second meeting was more prosaic, but still illuminating. The *Zwerg* was out before sunset, but we never should have noticed him if we had not been looking upward, intent on early pussy willows, amongst which he sat, calmly, at the height of a dozen feet. There is always a

curious impersonality about the gaze of this little owl. Even when he does look in your direction (and he does not flatter you by constant attention by any means), he does not appear to focus on you at all. Perhaps this is a trick of the eye, or else arises from its unlikeness to that of other owls. For although the atmosphere on this occasion was full of light, the bird's pupils were dilated to the utmost, and the irides were mere yellow rims.

CALIFORNIA PYGMY OWL

When first put to flight, by approach from below, Owlikins did not flutter off like a soft shadow, as might have been expected, but pitched downward nearly to the ground and buzzed off like a young meteor, fetching up suddenly on another osier branch some fifty feet away. Thither I followed and clambered up to a point within six feet of him on the level. Even then the bird did not appear greatly disturbed, and he deliberately looked away from me as often as at me—affording an example of self-sufficiency which was really startling. In "bout facing" not a muscle of the body moved but only the grim little death's head went round and round. The Little Corporal was not greatly disturbed, either, by the noise; but when I reproduced the Screech Owl cry, he gave me careful attention and appeared so interested that when he flew again it was only for a space of ten feet.

Each time, a little before he shifted, the bird evacuated, with an absurd little stretch and recoil, apparently so as to be ready for eventualities. By the way, what a fierce digestion those little cannibals must have, for their excrement is always glistening white! I do not know how else

to interpret this, save as the passage of the lime and phosphates of their victims' bones, which alone their voracious systems reject.

In spite of his insignificant size, the Pygmy is a dashing little brigand, and no bird up to the size of a Robin is safe from its clutches. So bold is he that upon one occasion, when Mr. Bowles threw a large stick at one, the Owl charged at the passing missile with all imaginable fury. The diet descends not infrequently to insects, but squirrels of twice the Owl's weight are promptly seized when occasion offers. Dark days are as good as night to them, and they are sometimes abroad on bright days as well.

The flight of the Pygmy Owl is not muffled by softened wing-linings, as is the case with the Short-eared and others which hunt much a-wing; it is rather pert and noisy, like a Shrike's. Like a Shrike, also, in extended course it dives with closed wings, then opens suddenly and flutters up with rapid strokes to regain the former level,—describing thus successive loops of flight.

The Pygmy Owl "sings" in a small hollow voice, *klook - klook - klook look look look look look look*, with an effect for tempo something like that produced by the accelerating rebound of a tiny wooden mallet, struck on resonant wood, in quality something between this and the pectoral quaver of the Screech Owl. To our great coarse ears it is, of course, ridiculously inoffensive, but how like the knell of doom it must sound to a trembling Chickadee!

Even more characteristic of the bird's presence in the forest is a weird, tolling note, ventriloquial, elusive, and most marvelously penetrating. At some distance it meets the ear as a mellow rounded *tŏŏk* or *tŏŏŏŏk*, for it must not be conceived too short, nor yet as other than a monosyllable. At close quarters, however, one detects a premonitory sibillation, and at the end a gurgling, muffled ring. The whole becomes then *(si)poolk(ngh)*, and it may be best imitated by a whistle which is conscientiously modified by attendant grimaces. Nor is it easy to exaggerate the penetrating character of this sound. When I first ran it down, I left camp with expectation of encountering its author somewhere within a hundred yards. I followed the siren call through a fringe of woods, across a bit of prairie, through a swamp, over a wooded hill, and into the depths of the forest beyond, where, at the summit of a grim fir tree, at a height of two hundred feet, and at a distance from camp of *more than one mile*, I made out the instigator of the pleasant exercise. Nor had I been deceived by the pixie's flitting, for upon returning to camp, the notes were presently just as conspicuous as they had been at the outset; and subsequent study proved that that Owl was confined in his range to just that particular bit of woods.

Coming south for the winter of 1912-13 Mr. Brooks amazed us by

his mastery of this woodland cry, and he used it as a key to unlock our local treasure boxes of *Glaucidium gnoma*. Not only will the Owls themselves respond to the cry and hurry forward, astonishment and perplexity written in every line, but all the song-birds rally also. It is the master call of the woods, as effective in California as the Screech Owl quaver is in the East.

No. 222

Arizona Elf Owl

A. O. U. No. 381. **Micropallas whitneyi whitneyi** (J. G. Cooper).

Description.—Face highly varied, the disc scheme much modified; loosened disc feathers below and behind eye only, tawny; the white component of the rim present as four isolated solid segments, or emaciated quadrants; a patch before and over each eye, and a distal submaxillary patch white; the submaxillary patches flanked first by dusky and then by cinnamon-rufous, the latter continuous across throat; upperparts grayish brown (hair-brown), finely spotted on head, sides of neck, and back with tawny; the edge of wing white, and large white spots on wing-coverts, inner tertials, outer edges of quills, and outer borders of scapulars, the last confluent in transverse stripe; underparts white, varied by dusky and cinnamon-rufous, the dusky prevailing on sides of breast and sides, elsewhere as fine barring, vermiculation, or clouding, the rufous broadly central in interrupted patchy pattern. Bill pale horn-color; iris lemon-yellow. A rare "brown phase" is also recognized. *Young birds* lack the tawny spotting of crown and the ochraceo-rufous element is otherwise reduced. Length 127-146.1 (5.00-5.75); wing 110 (4.33); tail 49 (1.93); culmen from cere 9 (.35). Female slightly smaller.

Recognition Marks.—The tiniest of owls—warbler size, but of course appearing larger; white in four patches on face; cinnamon-rufous of throat and underparts a rather striking feature.

Nesting.—*Eggs:* 2 to 4; subspherical, white; deposited in old woodpecker holes, usually in giant cactus. Av. of 16 specimens in M. C. O. coll.: 26.4 x 23.1 (1.04 x .91); index 87.5. Some specimens exhibit an index of 92.

Range of *Micropallas whitneyi.*—The desert portions of extreme southeastern California, east to southern Texas and south through Lower California and in Mexico to Puebla.

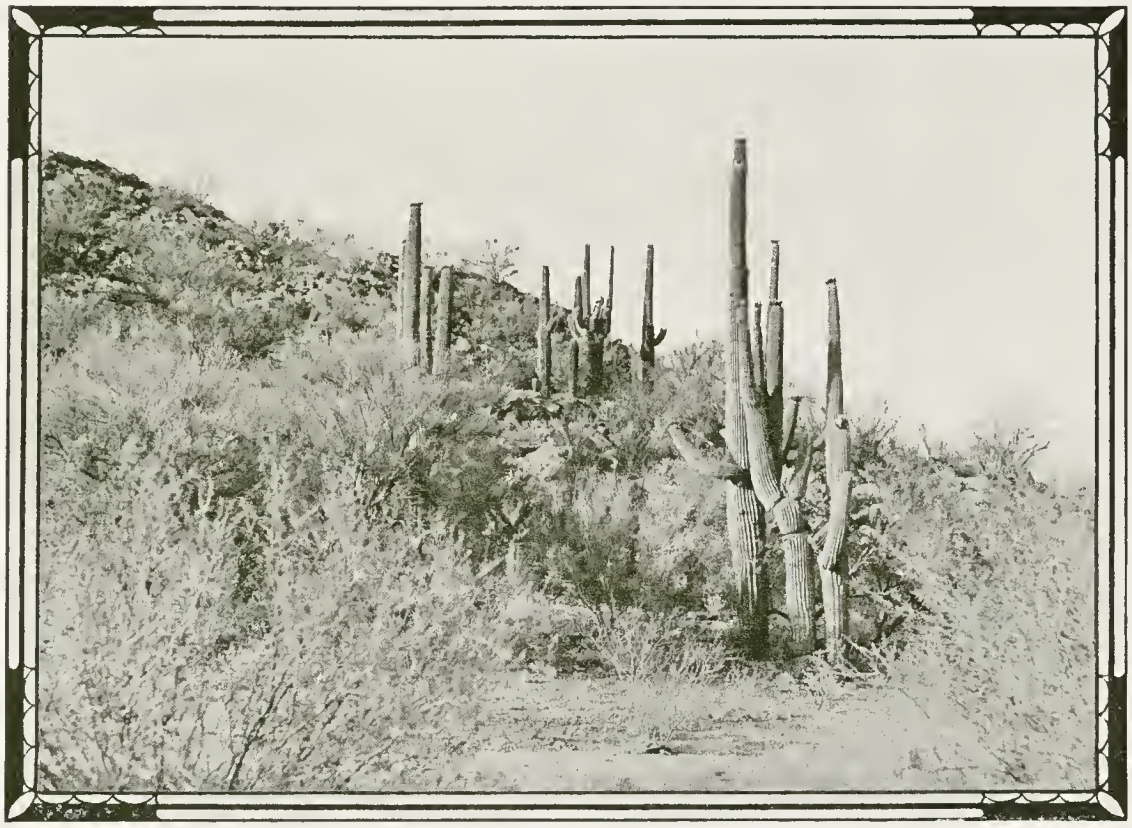
Range of *M. w. whitneyi.*—Desert portions of southeastern California, Arizona, southwestern New Mexico, and Sonora.

Occurrence in California.—Resident in small patches of Sahuaro cactus found in valley of the Colorado River.

Authorities.—**Ridgway,** Condor, vol. iv., 1902, p. 18 (Kern Co.; see *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 74); *H. Brown*, Condor, vol. vi., 1904, p. 45 (Colo. Valley, Calif. side; breeding); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 129 (Colo. Valley); *Brewster*, Bull. Nutt. Orn. Club, vol. viii., 1883, p. 27 (s. Ariz.; desc. young, nest, eggs, etc.).

A FEATHERED something at the bottom of a hole! Not a very inspiring thought, you say? No; not unless you happen to have been there. Not unless you have "the bug." Yet it is for this that the

oölogist will pack a ladder for weary miles over the desert. For this he will invade the haunts of the "side-winder" and the Gila monster. For this he will wrestle with tediously unending creosote and insinuating cat's claw. For this he will brave the cruel cholla, which looses its bunched lances at a touch, or pierces the feet of the passerby. For this he will



Taken in Arizona *Photo by the Author*

WHERE THE ELF OWL NESTS

ascend rickety heights of sahuaro; if need be, hug its spiny column to meet a flaw of wind or to gain an objective just six inches higher. (The thorns can be removed from the knees and arms at leisure over the camp fire.) For this he enlarges ancient wounds in the venerable cactus, plying his hatchet in the slithery substance of the "giant's" flesh, until his arms are ready to drop off from weariness. And all that he may at last come upon a bundle of feathers at the bottom of one of the holes.

The bundle is elongated, supine, comfortable to the hand, all but non-resistant. Draw it forth, the drowsy little elf! Claws it has, and they clutch convulsively, but they are scarcely strong enough to hurt you. Eyes it has,—yellow, saucer eyes, that might be wrathy if only the elfkin would wake up. Soft, weathered browns and streaky whites with touches of fawn make up a costume as proper as that of Scops or Bubo; but who

ELF OWL

can believe that this little midget, who may be entirely hidden in the hollow of your hand, is really an owl? Owl! your grandmother! Why, you want to nuzzle it and call it "pretty baby," and say its daddy ought to be proud of it. But hold! Let us see if there is anything else in that hole. One-two-three-*four* round white eggs, as big as a Flicker's, lying on the hard bottom of the cavity, without a shred of lining. This drowsy infant, this puny, pathetic pickaninny terror is a mother! Doubtless her little wits are working mightily under that mask of insouciance. Let us see. Relax the fingers. *Psst* goes the bird upon the instant and takes refuge in the nearest bush. There she glowers for a moment, and then takes wing for another sahuaro and dives confidently into another hole. It is the last we shall see of Mrs. *Micropallas whitneyi* today.

Truth to tell, Elf Owls are very difficult of observation. The lore which has grown up about them is scanty and not always consistent. They are strictly nocturnal in habit, are none too noisy, and live a life so secluded that we can do little better than catch them asleep, or note them under artificial conditions.

The classification of nocturnal noises proceeds by elimination, guesswork, or murder. Those who have tried the last-named method

describe the notes of *whitneyi* as a whinny, a rattle, or a *churr*. Major Bendire, who possessed as accurate a knowledge of this bird as any one, speaks of its[1] "peculiar call notes resembling the syllables '*cha-cha, cha-cha*,' frequently repeated in different keys, sometimes quite distinct and again so low that they could not be heard more than 20 yards off." Mr. Frank Stephens, also writing from Arizona, says:[2] "With the evening twilight they came forth from their retreats, and were sometimes dimly seen, but oftener heard calling to one another. They had several different notes one of which sounded like the syllable '*churp*,' while another was a low '*tw-zur-rrr*.' These cries were heard at all times of the night but oftenest in the early evening and again at daybreak." Our own notes made near Indian Oasis, Arizona, were of a bird which, quite after dark, moved from tree to tree in a bristling way and shouted *chit it ik*. These sounds scarcely constituted a rattle, because each syllable was possessed of a distinct individuality, albeit wooden enough. They were not altogether unlike the slapping of a stout string against a board.

Examination of many stomachs has developed the fact that Elf Owls subsist almost exclusively upon an insect diet. Beetles, ants, grasshoppers, and moths are mentioned; and one observer finds that they make sallies into the air for flying prey, after the fashion of flycatchers. No instances of their preying upon other birds have come to light; and, indeed, Elf Owls appear to be on the best of terms with their feathered neighbors.

Elf Owls, chiefly males, are sometimes taken by surprise in thickets, and their behavior on such occasions is quite like that of large Owls, viz., drawing themselves up rigidly with feathers "appressed," and looking like badly bored majors. We took a specimen, a male, from a hackberry tree near Tucson, who on this account looked a half size taller than he should. Stephens thinks that the male may be partially gregarious during the breeding season, for on one occasion he found two "sitting out" in a bush, and on another—five.

But, after all, we must come back to that old woodpecker hole in the sahuaro to get any further light upon the Elf Owl. Eggs are deposited from the 10th to the 20th of May, and the youngsters are covered soon after birth with abundant white fuzz. The female is likely to be in close attendance whatever the age of the chicks, but the male sleeps out invariably.

One special privation the Elf Owl is sometimes called upon to undergo. An unseasonable rain will ruin the most promising prospects, if the shelter be a sahuaro. It's a long time between drinks for the thirsty giant, so

[1] "Life Histories of North American Birds," Vol. I., p. 412.
[2] Bull. Nutt. Orn. Club, Vol. VIII., 1883, p. 28.

Roadrunner

About ⅕ life size

From a water-color painting by Allan Brooks

when the opportunity comes, its sponge-like tissues are charged with moisture to the summit of the column. The pressure becomes so great that excess water seeps into all cavities in spite of their hardened gourd-shell-like linings; and these hollows become completely flooded. In this way the nesting of 1917 was practically wrecked by a May storm. It is possibly for this reason that Elf Owls retire from the northern portions of their range in winter.

No. 223

Road-runner

A. O. U. No. 385. **Geococcyx californianus** (Lesson).

Synonyms.—Chaparral Cock. Ground Cuckoo. Paisano. Snake-killer. Correcamino.

Description.—*Adult:* Feathers of upper plumage (when wings folded) and breast, metallic-colored centrally, and edged successively with ochraceous-tawny and white, the webs of the edgings separated, imparting to the whole plumage a loose, ragged appearance; plumage of head and neck thickly studded with fine, black, bristle-like, denuded shafts; that of belly and flanks thread-like, fluffy, and towsled; that of lower back silky, loose in texture, but close-lying; basal color of crown (where nearly pure) and cervix, purplish black; that of upper back, scapulars, and wings bronze-green; tail graduated for three or four inches, the central pair of rectrices and upper tail-coverts dark bronze-green or mingled greenish and metallic violet; the remaining rectrices metallic bluish, purplish, or greenish black, broadly tipped with white; feathers of breast, changing insensibly on sides of neck, with purplish black reduced nearly to shaft-streaks; hence, breast prevailingly ochraceous tawny; chin and throat white; belly and flanks flaxen; lining of wings dusky throughout; lower back and rump (*entirely concealed by folded wings*) dull grayish brown; a series of stout, sharply-descending black lashes from upper eyelid; a bare space around and behind eye (nearly meeting fellow on crown) blue, bluish white, changing posteriorly to livid orange. Bill and feet dusky horn-color; the tarsi the same color basally, but guarded in front by large and somewhat irregular yellowish scales. *Young birds* are strikingly similar to adult, but retain nesoptiles as scattering, white, thread-like appendages to feathers of upper plumage for some time. Length 533.4-635 (21.00-25.00), of which the tail 254-330.2 (10.00-13.00). Av. of 10 specimens of both sexes: length 575.8 (22.67); wing 170.9 (6.73); tail 303.5 (11.95); bill 48.2 (1.90); gape 66 (2.60); tarsus 62.5 (2.46).

Recognition Marks.—Crow size (making some allowance for tail); long tail, terrestrial habits, and eccentric ways unmistakable.

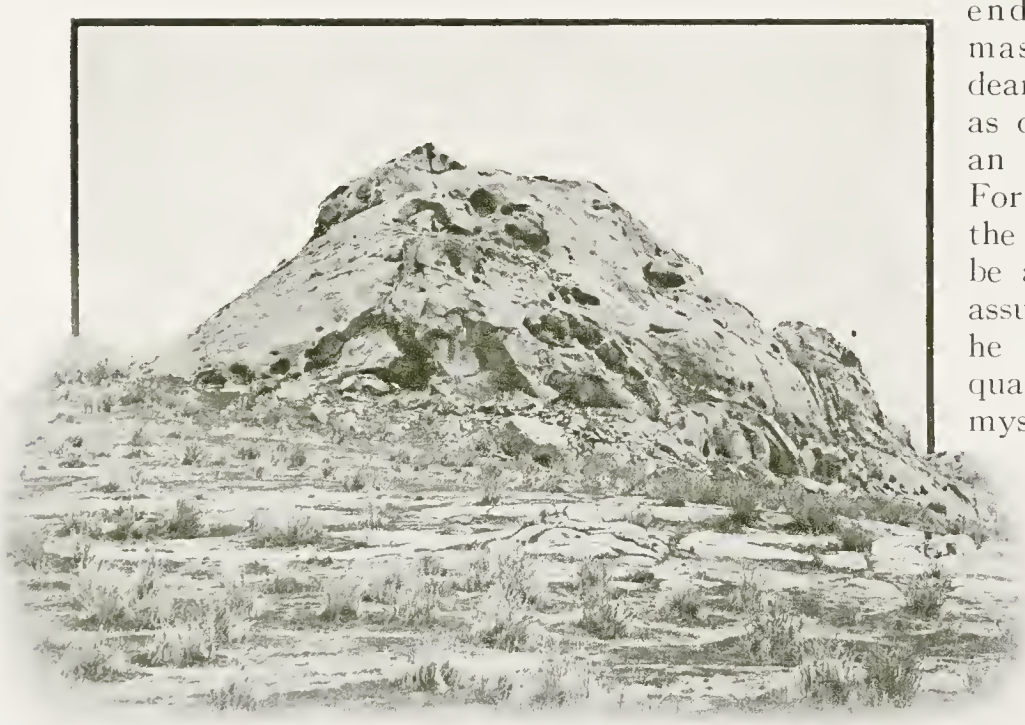
Nesting.— *Nest:* A bulky platform of interlaced sticks and twigs lined, or not, with bark-strips, tufts of grass, feathers, or soft miscellany; 12-18 inches in diameter; 4-12 inches in depth; placed at moderate heights in cholla cactus, mesquite clump, or live-oak tree, or even in cranny of cliff. *Eggs:* 3-9 (12 of record), usually 4; ovate or short ovate; dull white, or dingy yellow. The outermost calcareous layer is occasionally etched away irregularly, after the fashion of other cuckoos, and in such case is apt to be more deeply tinged with yellow. Av. size 39.1 x 30 (1.54 x 1.18); index 76.6. *Season:* March–July, but usually April or May; one, two, or three broods.

General Range.—Resident in Lower Sonoran and (locally) in Upper Sonoran life zones of the southwestern United States, north to upper Sacramento Valley in California; southern Utah, Colorado, and Kansas east to Gulf Coast and Texas, south through Lower California and over the central plateau of Mexico to Puebla.

Distribution in California.—Resident in both arid and lightly timbered sections of the Sonoran life zone, north, east of the Sierras, to Big Pine in Owens Valley; west of the Sierras to the upper portion of the Sacramento Valley. Avoids the humid coastal strip, but has been found as far northwestward as San Geronimo (Marin County), and Sebastopol (Sonoma County). Not found on any of the islands.

Authorities.—**Lesson** (*Saurothera californiana*), Compl. OEuvres Buffon, vol. vi., 1829, p. 420 (Calif.); *Bendire*, Life Hist. N. Am. Birds, vol. ii., 1895, p. 13, pl. 1, fig. 2 (egg); *Grinnell*, Condor, vol. ix., 1907, p. 51, map (Calif. range); *H. C. Bryant*, Univ. Calif. Pub. Zool., vol. xvii., 1916, p. 21, pls. (food and habits); *Hunt*, Condor, vol. xxii., 1920, p. 186 (running speed).

WE HAVE always contended that the Almighty has a sense of humor. Hence we point with pride to another of California's native sons, curious, conscious, and contradictory, the ingenu and adept of the desert, quaintest of feathered creatures. But we will not be understood as holding our favorite up to ridicule. Droll the bird is, even comic on occasion; but the humor of the Creator has been kindly, and he has endowed this desert masterpiece with endearing qualities, such as ought to assure him an enduring welcome. For, however grotesque the fowl may appear to be at first sight, I can assure the reader that he improves upon acquaintance; and as for myself, I confess toward the bird a good fellow feeling which is com-compounded of laughter and tears. The Spaniards called him *Paisano*, "the countryman," and recorded thereby



Taken in Kern County *Photo by the Author*

A CASTLE IN THE COW COUNTRY
THE NEST SHOWN IN THE NEXT ILLUSTRATION IS FOUND HERE

their appreciation of his uncouthness and worth —a diamond in the rough. More prosaically, we call him the Road-runner, the bird who tries conclusions, or else seeks escape, by running instead of flying. In the western portion of his habitat, where the running is not so good, we call the bird Chaparral Cock, and recognize his right to rule over that interminable half-forest which fills the landscape, and fills the eye, but never the pocketbook, of the Californian. Paisano makes his home here, but his heart is in the desert. For even where trees have become an accepted part of the Chaparral Cock's setting, he treats them rather as just so many rougher bits of desert to be gotten over, a-foot; and so he climbs, scrambles, runs, or leaps into and about a tree, instead of flying; and when he comes to quit it, he either leaps again, or volplanes to the ground. The bird is incapable of upward, or "earning" flight, but a clever sail from a tree-top, assisted by some flapping, will carry him a hundred yards or so, if need be.

Taken near Santa Barbara *Photo by the Author*

A WAYSIDE GLIMPSE

Since these are sadly civilized days, the chances are you will see your first Road-runner in a little hillside pasture dotted with trees. The bird stands at attention, eyeing you with mingled coquetry, mockery, defiance, and friendly curiosity. It is your next move,—or would be if the bird had not just then caught sight of a spider and darted nimbly after it.

Taken near Santa Barbara
Photo by the Author

"CROUCHING WAS THE FAVORITE ATTITUDE"

Then, scrutiny forgotten, the bird proceeds to have as much fun in that commonplace pasture as a boy at a circus. The mere suggestion of a cricket brings this racing outfit all up standing with neck outstretched, crest erected, and tail raised to an angle of forty-five degrees. It is a thrilling moment; and these thrillers recur in the active life of the cuckoo about once in every six seconds. The insect dispatched, the bird suddenly leaps six feet high to snatch a passing beetle. Bravo! Gusto! Avanti! *Mais non!* the bird recalls your gaze, assumes instantly a meek expression, tilts the tail sidewise in token of self-effacement, and makes as though to leave. As she goes, she minces in pretended fastidiousness, or reels in pretended intoxication, until—*psst!* the bird is faced about, head up, tail up, every outline filling the picture of clownish exaggeration. "Gracious! I nearly stepped on an ant!" And just as you prepare to dismount and bring your binoculars to bear upon the bird, she melts into a fringe of sage, and the exhibition is over for that day—mayhap for that month!

Seen on the desert proper, the Road-runner strikes you instantly as being the fitting thing. The purplish-blue and bottle-green of the upperparts, relieved by whitish edgings, fade before a background of glistening cholla or of fiery sand. If you are moved to pursuit, the bird laughs at you over giant strides, as, head down, tail depressed, it makes off with incredible ease. By a side swing of the tail the bird can round a bush with the utmost alacrity; or by a sudden expansion of that member, can put on the brakes instanter. With its long hooked beak the bird can deal out justice to centipede, horned toad, or lizard, even snake or scorpion; and it is interesting to note that the bird's head is protected against, say, the insensate lashings of a lizard's tail, by an array of stiff bristles scattered through

its plumage. Those immediately over the bird's eye are especially sturdy, and there can be no doubt of their defensive purpose. As for the Road-runner's legs, they are a marvel of speed and endurance, though a horse or a dog may tire them out. The footprints, two toes forward and two to the rear, are among the most characteristic sights of the desert; but we may not suppose that this double-toed arrangement makes for especial efficiency upon the ground. Indeed, it is altogether probable that this bird, whose ancestors were, and whose cousins are, strictly arboreal, is in so far handicapped. The hinder toes are weak; and, surely, three toes in front would give a better traction.

But in all this we are failing to give a tenth part of the witchery and grotesque appeal which are bound up in this wraith of the desert. The Spanish vaqueros felt it and left a hundred tales, now chiefly legendary, of the bird's cleverness and bent for mischief. The best and oldest tale, the classic of the range, I heard myself from a bandy-legged cowboy. It runs as follows:

When a Road-runner discovers a rattlesnake, asleep, he quietly fetches joints of cholla cactus until he has a perfect circle, or fence, built around his snakeship. Then he leaps into the circle, and out again after a sharp peck, which wakes the snake and starts the fight. Another nip and the battle is on in earnest. The enraged rattler tries to get at the bird, and as often as he starts over the dead-line, recoils from the prick of

Taken in the Mohave Desert *Photo by Pierce*

YOUNG ROAD-RUNNERS

the merciless thorns. Finally, in a fury of impotence, the snake bites himself, and yields his carcass to the exultant bird. My informant had seen this done repeatedly, and left the impression that rattlers, as a consequence, were very "skurce in these parts."

Taken in San Diego County
Photo by D. R. Dickey

NEST OF ROAD-RUNNER IN TUNAS AND CHILICOTHE

More probable, in fact well authenticated, are the stories that Road-runners destroy young birds, as well as mice and other minor mammals. These matters have been pretty well thrashed out;[1] and while it is established that some damage is done to bird life, it appears to be a quite incidental and inconstant trait. Of more consequence is the bird's enormous consumption of grasshoppers and crickets; and these form more than one-third of its entire diet. Beetles, cut-worms, and caterpillars come next in order, and of the latter, hairy caterpillars, "woolly bears," which no other bird, save Cousin Cuckoo (*Coccyzus americanus occidentalis*), will touch. Beetles, crickets, scorpions, lizards, and small snakes are swallowed whole; and the bird boasts a digestion which our American Croesus, he of the bread-and-milk diet, would surely envy. The ten per cent of vegetable matter with which the bird varies its regimen is found to consist almost entirely of "sour berries" (the fruit of *Rhus integrifolia*), and these evidently serve as sauce for snake and centipede *a la mode*.

Of the notes of this cuckoo, very little has been said in literature, and I am not able myself to do more than report progress. Its usual daytime call-note is most like the whine of a dog which has been several times refused admittance to the house, *Ookh ook(h) ook ooooo*, trailing off into despair. The despair of the bird is manifestly the mock heroic of the pleading lover. This pathetic sound, ventriloquistic and unplaceable, is one of the surest marks of springtime, at least along the brush-clad hillsides of southern California. A louder and much rarer "song" is uttered

[1] See an exhaustive inquiry by Dr. H. C. Bryant, University of Cal. Pub. in Zool., Vol. 17, No. 5, pp. 21-58, 1916.

by the bird from the summit of a live oak or from some other eminence. It consists of a series of sepulchral, somewhat owl-like notes, uttered in a swell, *kwoke* KWOKE KWOKE *KWOKE* KWOKE KWOKE *kwoke*. This, too, is somewhat ventriloquial, as well as low and penetrating; but I am positive of its source. A much more frequent, as well as endearing sound, is the soft *kook'-oooo* of the evening hours. This note is so soft, so tender, and so sweetly musical, that one immediately forms a new and higher opinion of this gallant lover. Surely here is romance. All is, I cannot certify that the sound actually does come from the Cuckoo and not from the Ground Owl (*Speotyto cunicularia hypogœa*). The uncertainty is shameful, but *que voulez vous?* One cannot pour salt on birds' tails in the midnight watches. All I can say is that I have repeatedly heard these amorous notes in country where I knew the Road-runner to be present, but could not discover the owl. And I have fancied that the Cuckoo notes were softer and a little more prolonged than the well-known madrigal of *Speotyto*. Here is a mystery and a challenge.

Taken near Santa Barbara
Photo by the Author

"SEEMED DIVIDED IN HER MIND"

We know that by some such approved methods the lady's heart is won, and we are pleased to add that the promises made in the springtime by Sir Geo Coccyx are not lightly broken. In nesting the birds prove themselves very adaptable. If in the open desert, the lowly shelter of the cholla cactus will suffice; but if mesquite trees are available, the bird much prefers the security of a horizontal limb or trunk. In the chaparral, the cover of the densest shrubs is sought, or else the live oaks. I have found these birds nesting also in the convenient crannies of the sandstone cliffs. In one such station overlooking the Antelope Plains of western Kern County, the bird sat with her tail bent forward sharply by the rear wall of her niche. When disturbed, she did not fly directly, but scuttled nimbly along the face of

the wall, then sprang into the air for a long sail which ended in the sage.

In no respect does *Geococcyx* betray its cuckoo affinities more clearly than in the irregularity of its egg deposition. Eggs of a dull white or dingy yellowish cast may be laid as frequently as every other day, but usually depositions are three or four days apart; and since incubation begins whenever the bird happens to feel like it, it is a commonplace to find the entire gamut from fresh eggs to pin-feathered young exhibited in a single nest. Four is a common number for a set, but I have seen seven, and nine are of record.

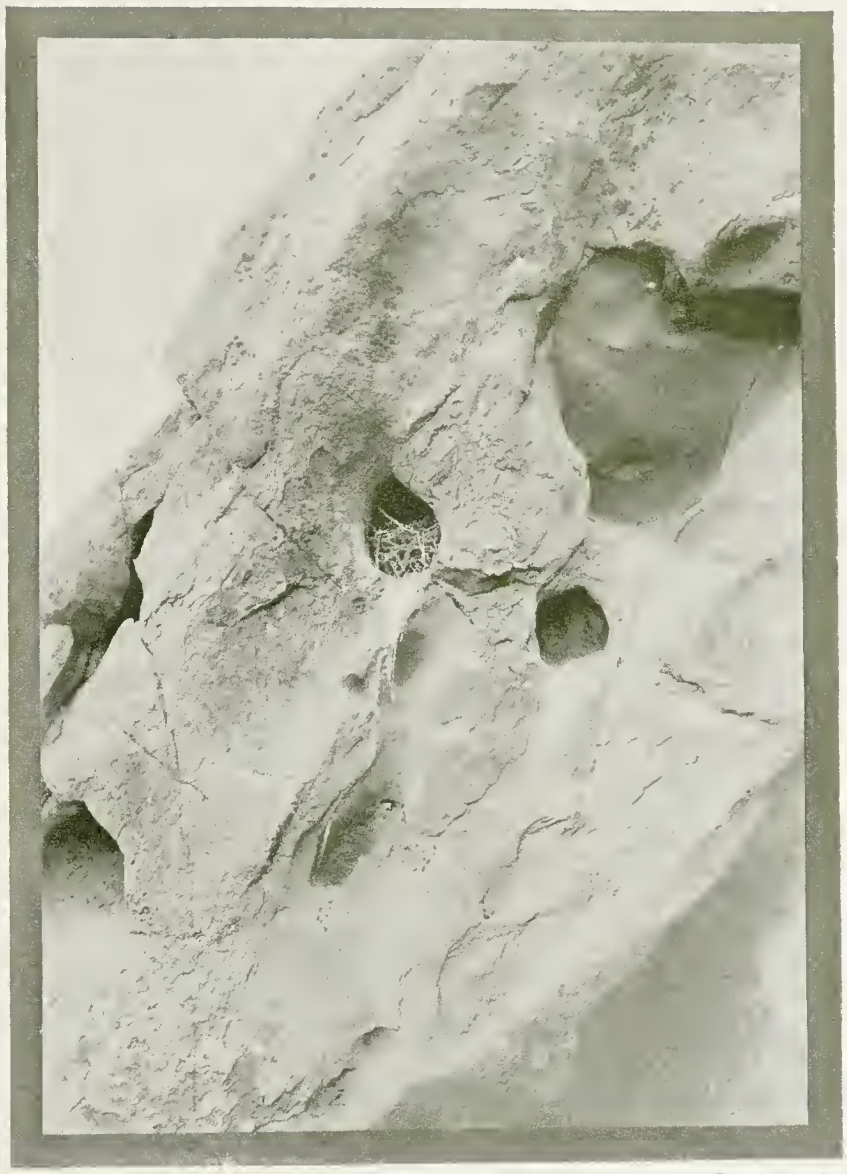
A glimpse of the home life of *Geococcyx* is permissible, and may be best accomplished by the following record of a single nest. On the 11th day of June, 1915, my son William found a nest placed twelve feet up and near the end of a branch in a thickly shaded portion of a live-oak tree in W. E. Johnson's hillside pasture. When the parent bird flushed, she disclosed three young, of which the youngest had just hatched, and one egg. I paid the place a clandestine visit after sundown, and the old bird sat tight while I broke twigs right beside her, and in other ways prepared the scene for photography on the morrow. Arrived, then, on the morning of the 12th I was pleased to find the mistress at home. She did not, however, sit to a

Taken in Riverside County

Photo by the Author

NEST AND EGGS OF THE ROAD-RUNNER

portrait, but glided off at six feet, and proceeded to give me an exhibition of plain and fancy gliding, flopping, tree-dancing, and dramatic posturing, such as I have never seen quite the like of before or since. Crouching was the favorite attitude, and this she accomplished either lengthwise or crosswise of a limb. If there was room for her tail to hang straight down, so much the better, for this produced a sort of roguish peekaboo pose. But if there was not room, the tail was welcome to stand straight up, or any old way.



Taken in Kern County *Photo by the Author*

A CELL IN THE CASTLE

REACHED BY RUNNING ACROSS THE FACE OF THE ROCK

The mistress seemed divided in her mind whether to lure or frighten me, and so she tried both. With the last-named effort went a series of low grunts, or coos, or moans, almost inaudible, alternating with a snapping of the mandibles, which was quite distinct in sound and a little disconcerting. Once she came within two feet of me, and I eyed her warily, for a tweak from this lady's bill would be no light matter. But for the most part she tried luring, having recourse for the purpose again and again to the ground. Here she advanced by little runs, alternating with crouching postures. Presently she developed the mouse-squeak ruse, feebly and tentatively at first, but afterwards sharply and convincingly. Two of these performances were accompanied by a slight rolling or treading motion, as though she had learnt the game directly from the Long-eared

Owl, who is a well-known adept at it. The squeaking, too, was well-timed, and not overdone. This ruse was soon dropped and not repeated thereafter.

In view of my refusal to follow the lure, the bird returned frequently to the depths of the tree. For this purpose she either ran up swiftly, or hitched along by starts and pauses, or else leaped by a single effort upon one of the lower branches. In despair, finally, she absented herself outright, whereupon I did the same. I found her brooding upon my return, and the same tactics were repeated with less fervor.

The youngsters, four of them now, exhibit a regular gradation of size, though perhaps not greater than a deposition of eggs on alternate days would account for. Only the eldest had his eyes open. The birds are dark in color, with a sparing but showy array of stiff white hairs, or bristles. The feet are exactly like those of the parent, that is, with two toes in front and two behind. But the bills, or snouts, are very different, and are curiously suggestive of those of birds of prey, especially vultures, for the nostrils are very prominent and placed well forward. When disturbed, as by expectation of food, or in assuming the maternal presence, the youngsters keep up a curious impersonal sound, somewhat between a hum and a buzz. This sound is produced with closed mandibles, and is still very penetrating to the ear.

The next visit was paid to the Road-runner's nest on the morning of the 14th, and an attempt was made to photograph with the set camera. The bird was not brooding at 8:30, but she presently appeared beside me in the tree, and was bolder and more menacing than before. Once, while I was adjusting the tripod, she actually glided over my leg, and I was afraid she would take a sly nip at an unwary finger.

Presently I take up a position at the base of the tree, bulb release in hand, whereupon the bird arranges a regular tour of inspection. For the most part she lurks behind some chaparral across the little canyon, but ever and again she appears around the end of the little brush-patch in plain view, crouches, glides, crouches again, scuttles, and so traverses a forty-foot stretch, which takes her out of sight again. In this operation she has been joined by the male, who insists, after some efforts at disuasion on his mate's part, upon securing some furtive glimpses of the monster. He is manifestly troubled, but yields precedence to his insistent wife. She will attend to the matter. And now another strange note has developed, or rather clarified itself to consciousness. It is somewhat between a squeak and a hoot and a sneeze, or is a combination of all three, and it is terminated by a violent but rhythmical clicking of the mandibles. What can it mean?

A hasty visit to the Road-runner's nest on the 21st instant dis-

Roadrunner and Nest in Tuna

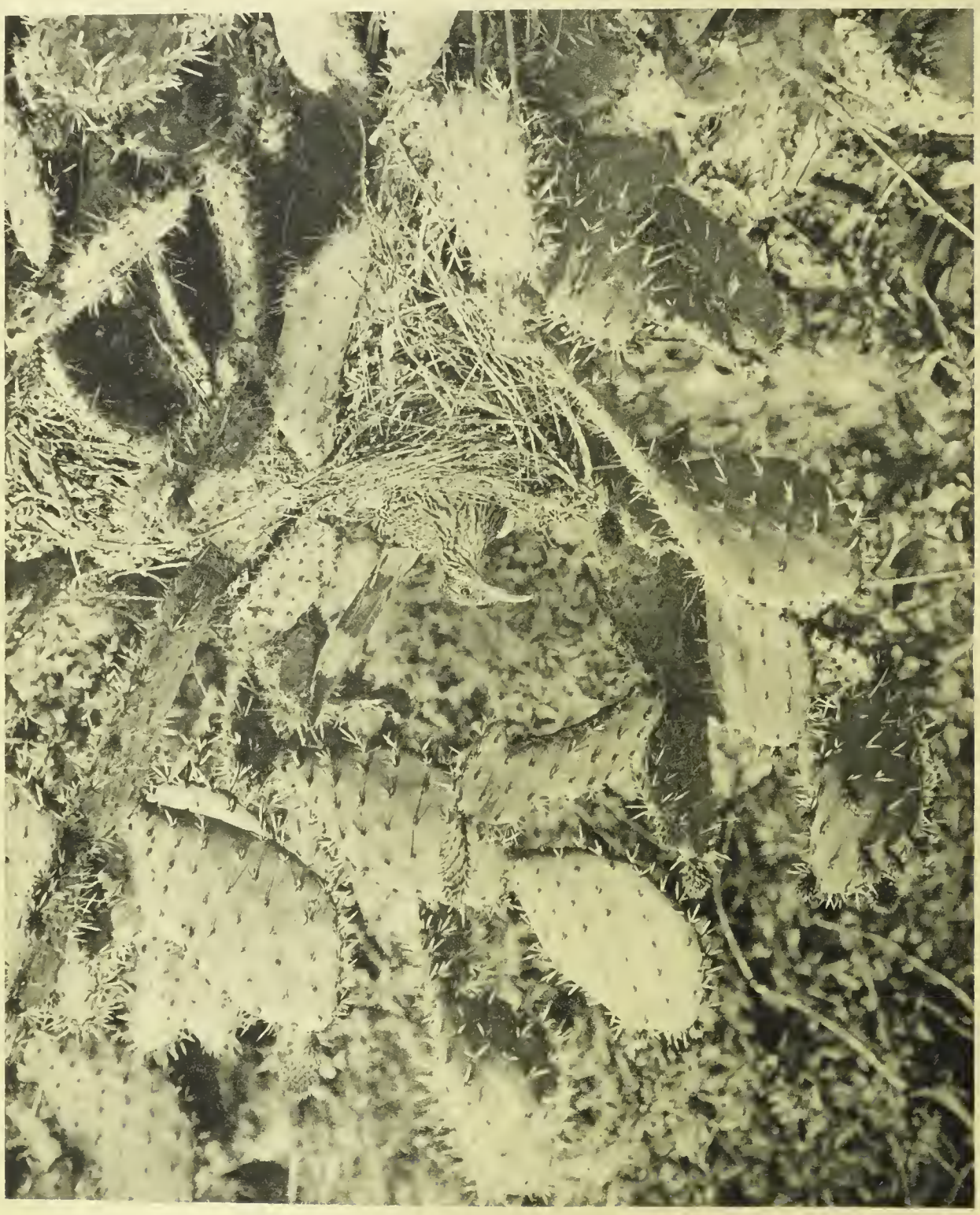
From a photograph by Donald R. Dickey

Tadea near San Diego

Roadrunner and Nest in Tunas

From a photograph by Donald R. Dickey

Taken near San Diego



covers a brimful basket of very surly youngsters, and even the two youngest members of the quartette click their mandibles threateningly. On the 24th the young birds are still in no wise prepared to leave the nest, but one bumptious youngster, and not the oldest either, manages to heave his pot-belly over the edge of the nest, where he blinks at me belligerently (no pun intended).

The mother bird coughs and wheezes upon the ground, and I see the purpose of this strange note at last. The bird is *pretending to disgorge some lately captured tidbit.* The performance is very realistic, even descending to the paroxysmal movements of eructation, the attendant contact of the bill with ground—where the Barmicidian morsel is deposited—and the ensuing relief. The coughing accompanies the effort, and makes it paroxysmic. Splendid! The ruse is too frequently repeated, however, to be convincing. Moreover, the coughing is sometimes given, as on previous occasions, half-heartedly, and without the attendant disgorgement play.

On the first day of July, which was my next chance to pay the nest a visit, nothing as to the whereabouts of the youngsters was discovered. I suspect, however, that they were "freezing" in the depths of the foliage, for I thought I detected the old bird giving hasty words of caution before she sailed, magnificently, from the tree-top.

Of the Road-runner in captivity a separate chapter should be written. It really is a most engaging pet. Always original, whimsical, grotesque, it exhibits also a marked affection for its master, as well as a friendly regard for humans in general. Indeed, if the birds were properly encouraged, instead of being systematically frightened, they would adapt themselves very willingly to the ways of men. Mr. and Mrs. William Otte, of Santa Barbara, have befriended the Road-runners along the Riviera crest, until they have come to haunt their place continually; and once a pair nested successfully in their garage. Mrs. Grinnell, of Pasadena, kept a Road-runner which had the freedom of the house, and which kept her friends in a fever of interest by its artless, eccentric ways. Most curious was its custom of backing closely into a corner for the night, with its tail held bolt upright along the wall.

Captivity reveals the fact that the bird is not closely dependent upon water. It will drink only at intervals of three or four days; but when it does indulge, it drinks copiously,—fills up as for a long sojourn in a distant desert. As for food, it is a good "rustler," and keeps the place clear of mice, beetles, slugs, and cockroaches. Unfortunately, nestling birds have to be kept out of harm's way—and chickens too, as like as not. If proffered a small bird, even though adult, the Road-runner will bolt it feathers and all; and the fact that it does not eject

the indigestible portions, such as bones, feathers and claws, is proof anew of the bird's excellent digestion.

No other bird is so bound up with the historic, romantic past of California. No other has so caught the fickle focus of public curiosity, or been rumored in so far a fame. Yet few others have been so penalized for such prominence. From the roisterous vaquero, who pursued the bird at sight, to the intoxicated possessor of the modern pump gun, who shot up everything in sight, the bird has suffered in cruel measure. Now that we have good laws, it is time to add good sense and good will, and so make amends for the stupid and depauperizing excesses of the older generations.

No. 224

California Cuckoo

A. O. U. No. 387a. **Coccyzus americanus occidentalis** Ridgway.

Synonyms.—Western Yellow-billed Cuckoo. Rain-Crow.

Description.—*Adult:* Above nearly uniform, satiny, brownish gray, with something of a bronzy-green sheen; the inner webs of the primaries cinnamon-rufous, the outer webs and sometimes the wing-coverts tinged with the same; central pair of tail-feathers like the back and completely covering the others during repose; remaining pairs sharply graduated,—blackish with broad terminal white spaces, the outer pair white-edged; a bare space around the eye yellow; underparts uniform silky white or sordid. Bill curved, upper mandible black, except touched with yellow on sides; lower mandible yellow, with black tip. *Immature:* Similar to adult, but plumage of back with slight admixture of cinnamon-rufous or vinaceous; tail-feathers narrower,—the contrast between their black and white areas less abrupt. Length 292.1-330.2 (11.00-13.00); wing 148 (5.83); tail 147 (5.79); bill 27.1 (1.067); depth of bill at base 8.9 (.35); tarsus 27.4 (1.079).

Recognition Marks.—Robin to kingfisher size; slim form and lithe appearance; brown above, white below; sharply graduated, broadly white-tipped tail-feathers.

Nesting.—*Nest:* A careless structure of twigs, bark-strips, and catkins; placed in trees or bushes, usually at moderate heights. *Eggs:* 3 or 4; elliptical oval; pale niagara green. Av. size 30.8 x 23.2 (1.21 x .91); index 75. *Season:* May–July; one brood.

Range of *Coccyzus americanus.*—Temperate North America; in winter south to South America.

Range of *C. a. occidentalis.*—Not common summer resident of western United States, north into southern British Columbia, east to eastern Colorado and western Texas, and south through Lower California and Chihuahua. Winter home not distinguished from that of species.

Distribution in California.—Summer resident of Sonoran zones, chiefly west of the Sierran divide; locally common in willow associations of river valleys only. Recorded north to Sonoma County, Shasta County, and Bishop in Owens Valley.

Authorities.—**Newberry** (*Coccygus erythropthalmus*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 92 (Ft. Reading, Shasta Co.); *Shelton*, Condor, vol. xiii., 1911, p. 19 (nesting habits, etc.; Sonoma Co.); *Jay*, Condor, vol. xiii., 1911, p. 69, figs. (s. Calif.; desc. and photos of nest, eggs, and young; habits).

CALIFORNIA CUCKOO

"SUMER is icumen in
  Lhude sing cuccu!
Groweth sod, and bloweth med,
  And springth the wude nu—
Sing cuccu!"

So sang one of the earliest of the English poets, of *Cuculus canorus;* but if we were to wait for the California Cuckoo to bring us summer we should lose our reputation for peerless Marches and full-blown Aprils. For the California Cuckoo is among the laziest of birds. When he does step in, surreptitiously, and hides in the greenery of late Maytime, the drama of summer has already reached the third act, and his services as enunciator are no longer required. Our bird comes silently, as well, and it is only after a week or two of residence, "getting settled," that he begins to sound the notes which will put him in touch with his fellows or, perchance, lead to him the lady love of the season. The song then is a series of explosive pouting notes: *Cuckookook ookookook ook kook kook kook*, first energetically then *rallentando et diminuendo.*

Although the bird enjoys a rather wide distribution throughout the forested lowlands of the Pacific slope, the sight of a California Cuckoo is one of the rarest; and save in some few favored places, recognized breeding haunts, his voice is the rarest of sounds. Although I have lived for twenty-five years in the West, and am accounted fairly alert of ear, I should hesitate to tell how few times I have heard this bird—say six or eight. Those more favored by reason of acquaintance with the birds' restricted breeding haunts[1] tell us that upon arrival in the north the birds keep to the higher woodlands for a period of two or three weeks, after which they retire to the willow bottoms to breed. After this their entire aspect changes. No longer shy and difficult of approach, they show themselves more or less freely, as those who belong to the country; while a bird found on the nest will almost suffer the caress of a hand before darting off quietly to be lost in the foliage. At such times, too, the loud challenge "song" gives place to a low guttural note, still "*kuk, kuk, kuk,*" with which the bird betrays anxiety, or signals to its mate. Then, too, a sort of exorcism is undertaken. The bird employs its ventriloquistic gifts and fills the neighborhood with weird unplaceable *kuk kuk kuk* sounds, which are intended to be for the intruder an accusing voice of conscience, or a reminder of avenging powers which haunt the woodland.

But apart, if possible, from its nesting anxieties, it is worth while to examine this genius at close range. Most birds prefer to face the enemy, so as to keep his every movement well in eye; but Cuckoo presents his back, a cold gray affair (save for russet wings), from behind which he peers now and then, turning his neck and giving you one eye in a lofty, well-bred way. I recall no other bird whose gaze is so calm, so direct, so fearless, yet withal so decorous. But nothing escapes him. He is not so vulgarly devoted to curiosity that he forgets business. Mercy, no! You may be within ten feet of him, but he plucks and swallows a caterpillar with as

[1] See especially A. C. Shelton in "The Condor," Vol. XIII., Jan., 1911, p. 19, and Antonin Jay, Condor, XIII., March, 1911, p. 69.

little ado or apology as if you were in the next county. But make a false motion, and the bird glides away into the deeper foliage with an ease and grace born of long practice. Silken, silent, sinuous, are adjectives which you instinctively apply to this sober, sly bird, as he steals through the upper branches, scarcely seen, but not unseeing, to emerge at length from the opposite side of the tree, and to dart away like a little brown arrow into some distant copse. A close study of the California Cuckoo's breeding confirms the opinion gained elsewhere, that *Coccyzus americanus* is a bird of highly irregular habits. It nests in May—it nests in August. It builds a nest on a rush order and deposits three eggs therein all within the space of a week—it loafs and dodders for a month, so that fresh eggs and young are found together in a nest. It lays one egg and attends it devotedly—or five and deserts them. It erects a slovenly platform which would disgrace a dove—or it builds a sturdy nest which would do credit to a thrasher. Or, again, it does not build at all, but uses instead a deserted nest of some other bird, Mourning Dove or Black-headed Grosbeak. And, lastly, it is a model of the home-keeping virtues, rearing and tending its own as all virtuous parents should; or, yielding to the taint of cuckoo heredity, it inflicts its casual offspring upon a foster mother, and goes its way unheeding. This last trait is worthy of particular notice, for it is exceptional, and not very numerously recorded in the West. Indeed, I am unaware of more than two instances, both recorded by Mr. Antonin Jay: On July 12, 1903, his brother, the lamented Alphonse Jay, took a set of Cuckoo's eggs from a Mourning Dove's nest which contained three eggs of the Cuckoo and one of the Dove; and again on July 14, 1907, he found a nest of the House Finch which held one egg of the Cuckoo and two of the rightful owner.

Taken in Los Angeles County *Photo by Antonin Jay*

BIG ENOUGH TO KOOK

As a locally exceptional instance, Mr. Antonin Jay records the finding, on May 10, 1901, of a nest which contained three newly hatched but *dead* young of the Cuckoo, and two eggs of the Mourning Dove well advanced in incubation. The Dove was sitting when the nest was found, and the construction of the nest appeared to point to the Dove as the

builder. The interpretation (which is my own) is this: The Cuckoo finding a completed but still unoccupied nest of the Mourning Dove deposited her own eggs therein. Whether she actually intended at this time to impose upon the Dove, we do not know—perhaps the Cuckoo did not know—and that she may not have known or cared is precisely the point of interest in a study of incipient parasitism. The Dove, knowing the nest to be rightfully hers, although her own hour had not yet come, covered it sufficiently to start developmental processes in the Cuckoo's eggs. The deposition of her own eggs followed in due course; and having an instinct to cover them for a sufficient time, she ignored the premature arrival of the derelicts, and neglected to feed them before they perished. Meanwhile, the rightful mother of the future foundlings, seeing that the complaisant Dove was willing to undertake an arduous duty in her stead, took herself off comfortably to caterpillar-hunting, and presently forgot the whole episode. In some such way, at least, the ancient wrong-doing of the Cuckoo began.

Taken in Los Angeles County *Photo by Antonin Jay*

NEST AND EGGS OF CALIFORNIA CUCKOO

It might fare ill for other song-birds if the Cuckoo abounded; but this much is sure, the advent of the Cuckoo would be a benison, in his own right, to the farmer. This testimony from an eastern author[1] is apropos: "Few birds are of so much service to the farmer. Especially are the fruit growers and nursery-men its debtors. In early spring they love the orchard. I have known them to destroy every tent caterpillar (*Clisiocampa americana*) in a badly infested orchard and tear up all the nests in half a day. While they may have eaten some caterpillars, out of most of them the juices were squeezed and the hairy skin dropped to the ground. Almost every watchful fruit grower has had a similar experi-

[1] Amos W. Butler, in "The Birds of Indiana."

ence. Prof. F. H. King found upon examination, that one had eaten nine larvæ of a species that destroys the foliage of black walnut trees. They also eat many canker worms . . . . . While they occasionally eat some of the smaller fruit, their work all summer long is to protect the fruit tree from its enemies. Although it has been accused of robbing the nests of other birds and eating their eggs, I do not believe the charge has been sustained."

In July, 1916, we found the snowbrush (*Ceanothus cordulatus*) at Sisson so infested with caterpillars that the entire chaparral cover was being ruined. Taken together there were literally bushels of the creatures. The solitary Cuckoo we encountered was having the time of his young life; but what was he among so many!

No. 225

Band-tailed Pigeon

A. O. U. No. 312. **Chlorœnas fasciata fasciata** (Say).

Synonyms.—Wild Pigeon. "Passenger Pigeon" (as frequently misidentified). White-collared Pigeon.

Description.—*Adult male:* Head and neck all around and underparts, changing on abdomen, dull wine-purplish, darkest on crown and chest, lightening, more bluish, on chin and upper throat; a sharp, narrow cervical collar of white; behind this a crescentic patch of rounded feathers in scale-like arrangement, iridescent, with brassy and bronze-green reflections; back, scapulars, and tertials lustrous purplish-slate; rump, upper tail-coverts, wing-coverts, lining of wings, sides and flanks ashy blue; crissum and under tail-coverts white; flight-feathers dusky; tail ashy blue basally, ashy brown terminally and crossed by a broad subterminal band of dusky. Bill yellow, tipped with black; legs and feet yellow with black nails; a prominent red eye-ring. *Adult female:* Like male, but somewhat paler, especially below, where also less purple and more brownish; cervical collar and metallic crescent *not* "subdued or wanting." *Immature birds* lack the cervical collar and crescent, and are extensively washed with rusty brown below, especially on breast; wing-coverts paler ashy, and ashy-white-edged. Av. of 4 males and 6 females: length (skins) 372.2 (14.65); wing 219.8 (8.65); tail 134.4 (5.29); bill 17.4 (.685); tarsus 27.1 (1.067).

Recognition Marks.—Little hawk size; a little larger than a domestic pigeon and appearing much like one; tail-feathers rounded; cooing notes; noisy flapping flight.

Nesting.—*Nest:* A rude platform of sticks placed at any height in oak tree or conifer, or even upon the ground. *Eggs:* usually single, but 2 of record; elliptical oval or abruptly pointed at one end; pure white. Av. size 39.1 x 27.5 (1.54 x 1.08); index 70. *Season:* February–October, but usually May–July; one brood.

Range of *Chlorœnas fasciata.*—Western North America from southwestern British Columbia south to Cape San Lucas and Central America.

Range of *C. f. fasciata.*—As above minus southern Lower California.

The Band-tailed Pigeon

Distribution in California.—Breeding locally and in variable numbers in Transition and timbered Upper Sonoran areas west of the Sierran divide, but chiefly in mountainous districts. The normal winter home of the species, so far at least as the Pacific states are concerned, is in northern and interior Santa Barbara County and in Ventura County, but their exact distribution at this season depends upon the acorn crop.

Authorities.—Vigors (*Columba monilis*), Zool. Voy. "Blossom," 1839, p. 26, pl. 10 (Monterey); *Bendire*, Life Hist. N. Am. Birds, vol. i., 1892, p. 122 (habits, nest and eggs); *Gilman*, Condor, vol. v., 1903, p. 134 (s. Calif.; habits); *Grinnell*, Condor, vol. xv., 1913, p. 25, map (occurrence in Calif., food, habits, destruction, etc.); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 575, figs. (general account).

WE FIND, rather to our surprise, that neither dictionaries nor bird-books define a difference as between "pigeons" and "doves." The terms are everywhere treated as synonymous. The case is analogous to that of "toadstool" and "mushroom." The mycologist assures us that these two terms are absolutely identical, yet popular apprehension persists in regarding all poisonous mushrooms as toadstools, and in reserving the name mushroom for edible toadstools. Is there not really a somewhat similar feeling in regard to the use of "doves" and "pigeons"? I think I voice the popular feeling when I define doves as *Columbids* which, by reason of small size, familiarity, gentleness, or other endearing qualities, are not properly regarded as fit objects of the chase. Pigeons, on the other hand, are those *Columbids* which, by reason of large size, gregariousness, stolidity, or general default of engaging qualities, are chiefly regarded for their food value. The term "dove" connotes affection, gentleness, purity, and peace. The term "pigeon" means nothing beyond mere huntableness, or, by implication, those very qualities of approachability, gullibility, and stupidity which play into the hunter's hand. Pigeons are game-birds, and doves are non-game-birds. The writer is willing to abide by this definition in so far as it affects this and the succeeding species of California birds.

BAND-TAILED PIGEON

The Band-tailed Pigeon of the West has been somewhat confused both in thought and report with his famous cousin, now extinct, the Migratory, or Passenger Pigeon (*Ectopistes migratorius*), of the East. The two species had little in common beyond the senseless confusion of identity. While formerly much more abundant than it is now, our western bird

Band-tailed Pigeon

About ⅔ life size

From a water-color painting by Major Allan Brooks

never existed in numbers to justify comparison with the invading hordes of *migratorius*. It is much less gregarious in habit; and, in particular, it does not colonize closely at nesting time. It was this last-named trait, and not some mysterious epidemic or disaster at sea, which, coupled with the attendant persecutions of market hunters, in all probability proved the undoing of the eastern marvel.

In only one instance of recent report has the Band-tailed Pigeon appeared in such numbers as to recall the tales of former days—and other climes. In the fall and winter of 1911-12, lured by an unusual crop of acorns, and impelled, no doubt, by corresponding "crop" failures elsewhere, immense numbers of Band-tailed Pigeons appeared in the interior valleys of Santa Barbara County, centering about the town of Los Olivos. It is probable that practically the entire summer population of California north of the Tehachipe, Oregon, Washington, and British Columbia concentrated at this point. It is not surprising, therefore, that "millions" of birds should have been reported in this section, although half a million would probably be much nearer the truth.

What followed on this occasion was a humiliating example of what human cupidity, callousness, and ignorance, when unrestrained, will accomplish toward the destruction of birds. Reports of the birds' abundance spread rapidly. The "Wild Pigeon" of the East had unexpectedly turned up in the West. Hunters from the outside flocked to the scene. Every gun was put into commission. By automobiles and train loads they came. The country was aroar with gunfire. The ammunition business jumped in a dozen towns. Enterprising dealers organized shipments to the San Francisco and other markets. W. Lee Chambers, writing for "The Condor,"[1] reports a Sunday excursion of hunters from San Luis Obispo which brought home 1560 birds. Another man, hunting for the San Francisco market, killed 280 pigeons under one oak in one day. The stupid birds, knowing nothing of their offense, flew miserably from one part of the valley to another, but would not, or could not, forsake their food. How great the destruction of that winter really was is matter of merest conjecture, but it must have been a very sensible proportion, possibly more than half the entire species.

I passed through this section of the country on the first of the following April and saw only 28 pigeons, but the sides of the road in many places were so covered with paper waste from cartridge boxes that I was reminded of a street in Chinatown on the morning after New Year's. Fortunately, this destruction and the agitation which ensued prompted the Government to declare a five-year closed season on Band-tailed Pigeons.

Farmers urged in extenuation of this slaughter that the Pigeons

[1] Vol. XIV., p. 108; Vol. XV., pp. 41, 42.

Taken in Ventura County *Photo by the Author*

BAND-TAILED PIGEONS AT REST

do damage to their grain fields. It is true, according to investigations carried out by Mr. Stanley G. Jewett in Tillamook County, Oregon,[1]

[1] "The Oregon Sportsman," Vol. III., No. 8, pp. 177, 178.

that the Pigeons visit newly planted oat-fields and gather grains scattered upon the surface. Such grain, as Mr. Jewett points out, would not mature anyway; and since the birds neither scratch nor delve, the damage done is immaterial. It is another case of hunting excuses.

In feeding upon the ground the birds alight in rather close order and proceed in one direction. Those in the rear, soon finding the ground entirely bare of food, rise, pass over their fellows, and settle in the line of advance. In this way there is a continuous movement of birds passing forward, and the general effect is of a feathered roller advancing slowly over a field. Acorns are the chief object of pursuit, and of these, by preference, such as have fallen upon the ground. These acorns are bolted whole, and the sizes which the greedy gullets can accommodate are mildly astonishing. After a good fill-up, the birds retire *en masse* to some exposed tree-top where they can mount guard against surprise attacks as well as ruminate and fatten.

Taken in San Diego County *Photo by Clinton G. Abbott*

A BAND-TAILED SQUAB

As the season advances, the pigeons lay various forms of berries under tribute. Elderberries are favorites everywhere. In a little valley near Eureka I saw pigeons stripping the berries off an elderberry bush which grew hard against the cook-house of a lumber camp.

In the northwestern counties the fruit of cascara sagrada (*Rhamnus purshiana*) is eaten with great avidity; and to a lesser extent the coffeeberry (*Rhamnus californica*) in the coastal ranges. Huckleberries of every sort are staples of Columbine diet, with salal berries, salmon berries, and madrones in due course. Manzanita berries, whether green or ripe, are eaten at any season. Under stress the birds will also consume the less nutritious Christmas berry (*Heteromeles arbutifolia*). In fact no edible berry or fruit is overlooked. In early spring, when other sustenance fails, these pigeons will resort to "browse," selecting oftenest the

leaf-buds of oak or manzanita. Indeed, Evermann records an instance[1] of a bird, near Ventura, which had stuffed its crop with the young balls (crowded flower-clusters, or "buttons") of a sycamore.

In the presumed absence of enemies, these Pigeons indulge in loud cooing, not unlike that of domestic varieties. In the presence of danger, however, they know how to sit very quietly, and they are so successful in escaping attention, especially in the deeper evergreen forests, that often the first inkling one has of their presence is given by the loud flapping wings of hurried departure. To stumble unexpectedly upon a berry-patch crowded with Pigeons, say to the number of several hundred, is a memorable experience. The alarm may not be general—the birds are loth to quit their feast—but they will rise by tens and twenties, by volleys and platoons, until the beholding hunter thinks he has discovered Pigeon Paradise.

But the flocking of Band-tailed Pigeons must not be exaggerated. These large concourses are rare. For the most part the birds move about in smaller bevies. Even in country where they are well distributed and common, scattering flocks, of less than a hundred each, are the rule. Flight is direct and vigorous, but it has the appearance of being labored—the bird weighs a good twelve ounces—and ever and again, overhead, there is the tell-tale clap of wings too vigorously smitten.

Whatever lack of caution these birds may display when they feel the support of a hundred fellows, is more than compensated at nesting time. The birds at this season scatter widely and become imbued with a preternatural cunning. Approach and departure from the nest, a mere wisp of crisscross twigs in oak or fir tree, is accomplished with the greatest circumspection. When flushed, the bird makes off and disappears with almost magical directness, and she (or he) is very careful not to put in an appearance again to establish identity.

Once the writer put in several days on the west slopes of the San Jacinto range, at an altitude of some 6000 feet, hunting for pigeons' nests. The cover was mingled black oak, golden oak, yellow pine, and white fir, with clinging stands of chaparral, and much open ground. Upon our first appearance on an open shoulder (where camp was later established), we glimpsed a Band-tailed Pigeon as it left the middle depths of a certain fir tree. A hundred feet or so away, it did not see us at first, for we became motionless; but it scented trouble, and instead of following its first impulse to return, took the top of a neighboring tree instead. Here it began cooing softly, then, catching sight of us, it fled toward us, upon the instant, with accusing directness. When not twenty feet away it gave a sharp *scrat* note of comprehension and alarm, the like of which I never heard before, swerved sharply, and took another tree top at some

[1] Barton W. Evermann, Auk, Vol. 3, 1886, p. 92.

Western Mourning Dove

Male and female, about ½ life size

remove. Here it immediately resumed its cooing, and here it was joined presently by two strangers, young perhaps, welling up from some unnoticed depth of the fir thicket. It was all so mysterious, so stealthy—and so efficient!

On a later occasion I surprised this same bird posted, sentinel fashion, in a pine tree. Upon discovery he flew with exaggerated effort, striking his wings together noisily over his back, and uttered a harsh guttural *raaack raack*, several times repeated,—and intended, no doubt, as a reproof to prowling bird-men. Careful searching of five tall fir trees, limb by limb, disclosed only a last year's (or last spring's) nest, twelve feet up and fifteen feet out upon a horizontal fir limb.

Other observers, of course, have been more lucky, and from their reports we know pretty well that Band-tailed Pigeons nest almost anywhere in Transition zones in the southern or coastal ranges, and also, possibly in the Sierra Nevada. There are distinct evidences of a colonizing tendency, but nests are never found in close proximity, not nearer, say, than once in three or four acres. On the other hand, nests are sometimes miles removed from their fellows. The season is very irregular: March 6, 1877 (Stephens), and Aug. 11, 1913 (Wright), are extreme California dates; and it is probable that the birds nest only once each season. Only one egg is deposited—(there is one instance reported, by Clarence S. Sharp,[1] of two); and so far as known there are no authentic instances in California of the bird's nesting upon the ground, as it undoubtedly does upon occasion in the northern states. Incubation lasts, according to Major Bendire, from fifteen to eighteen days; and the care of the young must occupy a full month more. The Band-tailed Pigeon is, therefore, the least prolific of all recognized "game" birds; and if it is to be preserved at all, it must be taxed with extreme moderation.

No. 226

Western Mourning Dove

A. O. U. No. 316a. **Zenaidura macroura marginella** (Woodhouse).

Synonyms.—Wild Dove. Turtle Dove. Carolina Dove.

Description.—*Adult male:* General color of upperparts olive-brown (Saccardo's umber); margins of wing, broadly exposed portions of quills (the primaries changing to fuscous distally), hind-crown, the cervix (lightly or not at all), bluish gray (light to clear Payne's gray); the lower scapulars and tertials broadly but sparingly black-spotted; tail finely graduated, the central feathers like back, the succes-

[1] "The Band-tailed Pigeon in San Diego County," Condor, Vol. V., 1903, p. 16.

sively shorter feathers blue-gray basally, changing from light bluish ash to white on tips, and crossed by black subterminal band; a patch of bright purplish red iridescent feathers on upper side of neck; the remainder of head shading light drab, paling (nearly white) on throat; a dab of black below ear; breast deep vinaceous, shading through belly to cream-buff of crissum; wing-linings, axillars, and sides light blue-gray (light Payne's gray). Bill black; bare space about eye light blue; feet lake red. *Adult female:* Similar to male, but bluish of hindhead and neck restricted or wanting; less iridescence; breast like back or merely tinged with vinaceous. *Immature:* Like adult female, but duller, without iridescence; black spot below ear wanting; feathers of foreparts above and below tipped with whitish. Length about 304.8 (12.00); wing 146.1-152.4 (5.75-6.00); tail 146.1-165.1 (5.75-6.50); bill 14.5 (.57).

Recognition Marks.—Robin size; sober, blended colors; rapid, graceful flight, accompanied by whistling sound of wings; mournful, "cooing" notes.

Nesting.— *Nest:* A frail platform of twigs or straw, placed at moderate height in tree, bush, cholla cactus, etc., or on stump, fence or low ledge; sometimes on ground in open field. *Eggs:* 2 (3 and 4 of record); elliptical oval, or abruptly pointed; white. Av. size 28 x 21 (1.10 x .83); index 75. *Season:* March–July; August–December of record; two or more broods.

Range of *Zenaidura macroura.*—The West Indies and North America from southern Canada to Panama.

Range of *Z. m. marginella.*—Western North America from the eastern edge of the Great Plains to the Pacific (except possibly the northwest coastal strip), north to British Columbia, Saskatchewan, and rarely Mackenzie, south to southern Mexico and, in migrations, to Panama.

Distribution in California.—Abundant summer resident and migrant throughout the State in Sonoran zones, and in lesser numbers through Transition zone. Also a casual visitor in Canadian zone. Winters commonly in the valleys of the San Diegan district, irregularly and locally north through the central valleys. Common on all the islands.

Authorities.—**Peale** (*Ectopistes carolinensis*), U. S. Expl. Exped., Birds, 1848, p. 189 (San Francisco); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 35 (San Joaquin Valley; habits, etc.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 53 (s. Calif. ids.); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 588, figs. (general account).

WHEEEW hewh heeeeoooo hewh heeeeoooo. The tender, impassioned notes of the Mourning Dove are not only the most familiar, the most characteristic and commonplace, but the most lyric and soulful as well, the most romantically moving of any in the American chorus. Though the love-lorn swain blows but a single note, the sound sets a myriad chords to vibrating,—hope, memory, and desire, no less than sadness. Gentle melancholy, the sickness of springtime, is really the budding of desire, the yearning of the Live One for his complement, the Also Living. Love-sick the bird unquestionably is, but who are we that we should affect to pity or to scorn? His is a voice of dignity and allurement, a voice of gentle compulsion which bids us also sigh and hope and aspire. Oh, there be those who call it doleful, and who profess a dislike for the

solemn tenderness of the Mourning Dove, but they are such as have never loved, or who, having loved, have seen life's wine turned into vinegar. They do not wish to remember. For forgetfulness and indifference are alike impossible for those who listen. *Wheeew hewh heeeeoooo hewh heeeeoooo.* Voice of the heart! the heart expressive, yet forever unexpressed; achieving, yet forever uncontent; aspiring and forever aiming higher, higher, higher! Voice of the spirit art thou, O gentle bird! *Wheeew hewh heeeeoooo hewh heeeeoooo.*

Taken in San Luis Obispo County *Photo by the Author*

ON NEST IN MONTEREY CYPRESS

These familiar, long drawn "mourning" notes are uttered only by the male, and for all their tenderness they have a penetrating quality, which makes them one of the most insistent elements in the chorus of springtime. Besides these the birds make no other sound, unless we count a musical wing-note which is made when suddenly taking flight, and which is so distinct that one can never be quite satisfied that it is not a vocal outcry. The same note, moderated, is heard in mid-flight, and also with renewed force when the birds are checking their flight or alighting; and it is so exactly timed with the wing movement that we must conclude its external origin.

The Wild Doves are model lovers and are chiefly known for their domesticity. During the mating season they sometimes vary the monotony of the ordinary whistling flight by sailing about in graceful curves on stiffened, noiseless wings. There is always an abundance of billing and cooing; and love-making, it is to be feared, often interferes somewhat with the practical side of housekeeping. At least the young wife is not a good house-builder, although she may be, and doubtless is, a kind mother.

A Dove's nest is the symbol of frailty. A few careless sticks or straws are laid together in a platform, and lodged at a moderate height in the

crotch or upon the horizontal limb of a tree or bush. Fence-corners, the tops of stumps, brush-piles, and overgrown stone-heaps are favorite places, and occasionally eggs are laid upon the ground with little pretense of a nest, or none. This is necessarily the case in sections given over to grain-growing; and in such regions, also, the danger from ground-haunting, predatory animals is greatly reduced. Sometimes the dove builds in bush-clumps entirely surrounded by water, the purpose being, manifestly, to escape prowlers. In the deserts the dove has recourse to the cholla cactus, although, truth to tell, she is not an adept at this sort of thing, and chooses for her site the lower, weathered portions of the plant, rather than the "stickery" top. Again, old Thrashers' nests or those of Brewer Blackbirds, Magpies, and Jays afford acceptable foundations. When one of these is used, the tenant merely adds a few clean straws or twigs by way of lining. Now and then, however, a quite substantial nest is constructed, and one which reflects credit upon the gentle builder. The student of caliology, indeed, finds more to wonder at in the varying artistry of doves' nests than in the case of any other group of birds.

Taken in Washington
Photo by F. S. Merrill

NEST AND EGGS OF WESTERN MOURNING DOVE

Mourning Doves, like the domesticated varieties of species distantly related, are very prolific. Eggs may be looked for at any time from March to September. Indeed, a competent observer, Dr. Howard Jones, living as far north as south-central Ohio, declares that he has seen Doves sitting on fresh eggs every month of the year except December and January. According to the same writer, the female dove sometimes lays again before the young have flown; in which case the latter must assist, perforce, in the duties of incubation.

An instance came to notice here near Santa Barbara which would go to show that oviposition, in case of the Mourning Dove, may be, for the annual period of activity, a regularly recurring monthly function independent of special stimulus. A nest found on the 31st day of July (1915)

contained two eggs, apparently fresh, and those were left undisturbed. Nearly a month later, viz., on August 25th, a Dove was flushed from the same nest, which was found to contain four eggs, all sterile. Apparently, an unmated bird, or one which had lost its mate early, had functioned according to nature's predetermined schedule.

Young Mourning Doves are delicate creatures, in spite of the fact that they get as fat as oysters before they leave the nest. They are fed by regurgitation and their food is mingled with a whitish fluid from the adult stomach — "pigeons' milk."

"At night," according to Langille, "the old one sits crosswise on them even when they are quite large, the nest and birds together thus making quite a grotesque pile."

When frightened from the nest the female drops instantly to the ground, and goes off into a series of elaborate convulsions in an effort to distract attention from her treasures. From the fact that this trait of decoying is oftenest exhibited by ground-nesting species, it is fair to guess that the Mourning Dove was originally and exclusively, as now occasionally, a ground-nester. The male, also, is pretty sure to be close at hand, if, indeed, he was not taking his turn upon the eggs; and when the young are ready to leave the nest he takes charge of them, while his mate is incubating another pair.

Taken in San Bernardino County *Photo by W. M. Pierce*

"A DOVE'S NEST IS THE SYMBOL OF FRAILTY"

In late summer and early autumn the Doves begin to gather into groups, or small flocks, although they cannot, like the Pigeons, be characterized as "highly gregarious." Food, taken chiefly from the ground, consists, in part, of fallen grains, but always largely, and often exclusively, of weed seeds. The industry and capacity of these birds as weed-seed destroyers is enormous. Beal reports one stomach which contained 6400 seeds of the troublesome foxtail (*Chætochloa*), another 7500 seeds of the yellow wood sorrel, and another 9200 seeds of mixed varieties, but mostly noxious weeds. These were single meals, and the bird requires several such in the day. Suppose each bird consumed three cubic inches, a very modest allowance, of weed-seed *per diem*. That would make half a bushel of weed-seed per annum, enough to seed ten acres of land with any one of a dozen varieties of plant pests. Judged by this standard, and it is a fair one, the Mourning Dove bulks large as an economic factor in the development of California. And for pay, this zealous "hired man" asks only exemption, for the trifling amount of standing grain (chiefly wheat) occasionally taken is agreed by experts to be a practically negligible factor, not over two per cent of the bird's total fare.

Taken in the Ojai *Photo by Dickey*

MOURNFUL SQUABS

The question whether the Mourning Dove is or is not a "game-bird" is one which I cannot bring myself to discuss dispassionately. Our laws, reluctantly perhaps, recognize it as such, and tens of thousands of them are killed annually, especially in the valleys of the San Joaquin and Sacramento, where it abounds. Such slaughter is abhorrent to all bird-lovers. It is not alone because of the bird's approved usefulness. The men who do the killing are often the very ones who would profit most by

Western Mourning Dove on Nest in Pepper Tree

From a photograph, copyright 1914, by D. R. Dickey

Taken in the Ojai

Copyright 1914 by D. R. Dickey

non-killing. It is for the farmer to decide whether the "sport" of killing doves is worth more to him than his crops, whether the meat secured is worth, say, a dollar an ounce. Hunters urge, fairly enough, that the bird is abundant; that it is possessed of considerable recuperative power, i. e., is prolific enough to stand up under gun-fire; that it easily develops caution and the attitude of fear; that its rapidity of flight constitutes it an ideal target; that its flesh is sapid; and that its body yields a sensible return of food value. We shall ignore, too, the fact that these birds nest regularly throughout the State in July, also to a considerable extent in August, and not infrequently in September; so that the offspring of slaughtered parents must be left to perish. The business of sport cannot wait forever upon maternity.

But the real question is, how can you endure to quench that voice,—that haunting, wistful, friendly voice? How could you wish to rebuke that erstwhile lover, the model of his race? How can you offend such confidence? or how abide the accusative eyes so wont to be tender? Or how shall gentleness—for the Mourning Dove is the most perfect exemplar of that sovereign grace—how shall gentleness survive on earth at all, if we meet it so with shot and shell? Is it a pleasure to be shunned by gentle creatures? to move always along a path of terror? to feel the woodland grow silent before us? to live, in short, in an empty world?

No. 227

Western White-winged Dove

A. O. U. No. 319. **Melopelia asiatica mearnsi** Ridgway.

Synonyms.—Singing Dove. *Paloma cantador.*

Description.—*Adult male:* General color scheme somewhat as in preceding species; upperparts chiefly olive-brown (Saccardo's umber), changing to bluish gray on rump, top of head and neck washed with light vinaceous purple; wing with a broad white band from bend to tips of outer secondaries, the transitional area (between white and olive-brown) bluish gray; extreme edge of wing and quills blackish, the outer primaries very narrowly bordered and the outer secondaries more broadly tipped with white; a heavy dab of black below and behind ear, sometimes iridescent and flanked by feathers on sides of neck which exhibit first bright purplish red and then greenish iridescence; breast much like back, shading to whitish of chin and upper throat; remaining underparts, including lining of wings and axillars, bluish gray (light Payne's gray), paling on middle of belly and crissum; tail rounded from above, blue-gray basally, white terminally, separated by black band; the central covering pair of feathers like back, but faintly echoing general scheme by darker and lighter. Bill black. *Adult female:* Similar to male, but duller; iridescence on side of neck reduced.

Immature: Without iridescence or black spot under ear; purplish vinaceous wash of head, etc., reduced. Length of adult about 300 (11.81); wing 160.3 (6.31); tail 93 (3.66); bill 22.6 (.89); tarsus 25.4 (1.00).

Recognition Marks.—Robin size,—a little larger and stouter than Mourning Dove; tail rounded, not sharply graduated; white wing-patch distinctive.

Nesting.— *Nest:* A rude but sometimes bulky platform of interlaced twigs, weed-stalks, or grasses; placed at moderate heights in bush or tree. *Eggs:* 2; variable in shape, but elliptical oval or elliptical ovate; creamy white, ivory-yellow, or pale cartridge buff. Av. size 30.5 x 23 (1.20 x .906); index 75. One specimen in the M. C. O. coll. measures: 33 x 20.57 (1.30 x .81); index 62.3; another, 25.4 x 20.57 (1.00 x .81), i. e., index 81; still another, a "freak," 27.7 x 16.76 (1.09 x .66); index 60.5. *Season:* April–July; one brood.

Range of *Melopelia asiatica.*—Southern border of the United States south to Costa Rica; Bahamas and Greater Antilles.

Range of *M. a. mearnsi.*—Southwestern New Mexico, southern Arizona, southeastern California, southern Lower California, and the Mexican plateau, south to Mexico and Puebla. Accidental in Colorado and western Washington (2 records).

Occurrence in California.—Summer resident locally in the valley of the Colorado River. A straggler taken near Escondido in San Diego County (Sept. 25, 1911, Dixon).

Authorities.—**Morcom** (*Melopelia leucoptera*), Bull. Ridgway Orn. Club, no. 2, 1887, p. 40 (Colo. Valley); *J. Dixon*, Condor, vol. xiv., 1912, 196 (Escondido); *Grinnell*, Univ. Calif. Pub. Zool., vol. xii., 1914, p. 123 (Colo. Valley); *Wetmore*, Condor, vol. xxii., 1920, p. 140 (habits; Ariz.).

WE HAVE no record, apparently, of ornithological conditions obtaining in Coachella Valley, which is the heart of the Colorado Desert, prior to its inundation in 1907 by "New" River. But we may be fairly certain that the mesquite forest, whose "bones" protrude even yet from the whitening shallows of Salton Sea, once resounded to the sonorous calls of the White-winged Dove. For where the mesquite tree stands, there dwells *Paloma cantador*, the "Sonora Pigeon," beloved of Mexicans, and most familiar of south Arizonian birds. Palomas give not only color and movement to the landscape in Maytime, but their combined vocal offerings form the great diapason of all morning choruses from the Gila and the lower Colorado south to Brownsville and through the land of the Aztecs.

Oo uh' uh oooo, says the amorous dove; and hearing him for the first time in the distance, you might take him for a young cockerel. In uttering this note the bird throws his head well forward and closes his eyes ecstatically (thereby disclosing a livid blue eyelid) but he does not open his beak. In defiance of all the masters, he sings through his nose. The effect is charming, it must be admitted, but one cannot help wondering what the sound would be if only the bird would "sing out." Chanticleer's effort would surely pale beside it. As the bird becomes more earnest—gets down to business—the cadence changes. *Hoo'luh oo' uh hoo'luhoo'uh*,

in even but impassioned tones, is probably intended for a single pair of ears, or is an utterance *en famille*, after the eternal question has been settled. Anyhow, with a score of courtships proceeding abreast, the dove-thronged forest of May-time vibrates to a volume of sound not otherwise attained in the West; and the fortunate visitor is not likely soon to forget the multitudinous pipe-organing of *Melopelia*.

The White-winged Dove is a tardy migrant, and its numerous arrival in late April is quite conspicuous. Flight is conducted at low levels, and occupancy is effected by a progressive invasion rather than by a sudden coup. The birds troop across the roads in endless desultory columns, or else rise hastily from a wayside snack; or, most likely of all, gather upon exposed branches to mark with curious wooden detachment the passing of the intruder. When surprised, the White-wing makes off with a noisy flapping, like that of a Band-tailed Pigeon; and the bird is so proud of the noise it can make with its wings, that it not infrequently stages for the benefit of the ladies a sort of flap-doodle song-flight. There is no song forthcoming, but the performer applauds his own resolution by a rhythmical percussion of the wings.

Taken in Arizona — *Photo by the Author*

A WAYSIDE REFUGE
WHITE-WINGED DOVES IN TREE-TOPS

Seated on the nesting platform, especially with the tail turned away, the White-winged Dove scarcely differs in appearance from its cousin, the Mourning Dove; but when the bird is flushed, a large white crescent on each wing flashes into view, and one notes the broad terminal band of white on a tail spread fan-wise. The stolid groups which gather in trees remind one, rather, of Pigeons (Band-tails) than of our more familiar and more solitary Dove.

The nesting of the White-winged Dove is rudely, but not exclusively, colonistic. A bit of mesquite or a stretch of willow may yield a dozen nests, while another half mile stretch, fully as inviting, is tenantless. The slovenly architect is not more careful than other dove-breeds, and so we have all varieties of nests, from mere horizontal branches and crossed sticks to elaborate platforms of grasses or weed-stalks. The eggs, two in number, are never "white" but always pale pinkish buff, or, more exactly, "pale cartridge buff" in tint. Only one brood, apparently, is raised in a season, at least in the North. From the number of idlers, whole flocks of them, seen at nesting time, one suspects that an earlier brood may have been reared somewhere in Sonora. At any rate, immature birds, birds of the year, as we suppose, mingle with their elders in the northern flight.

No. 228

Mexican Ground Dove

A. O. U. No. 320a. **Chæmepelia passerina pallescens** Baird.

Description.—*Adult male:* Prevailing color brownish vinaceous, changing to olive-brown on upperparts, centrally (back, scapulars, inner tertials, rump, and upper tail-coverts), lightening on sides of head and forehead, whitening on throat, lower belly, and crissum; crown and neck bluish gray; feathers of breast with dusky centers; wing-coverts heavily but sparingly spotted with purplish black or blackish violet; alula, primary coverts, and quills blackish on exposed portions; the axillars, lining of wings, and concealed webs of quills, rich orange-brown (exactly auburn); tail slightly rounded, bluish dusky basally, blackening terminally, the outermost pair of feathers tipped with white. Bill yellow with darker tip; feet yellow. *Adult female:* Somewhat similar to male, but much paler and duller, scarcely vinaceous, olive-gray or pale brownish instead; no blue-gray anywhere; the spotting of wings *bright rusty* or barely glossed with purplish. Length 158.75-177.8 (6.25-7.00); av. of 7 adults: wing 84.2 (3.315); tail 56 (2.20); bill 11.1 (.44); tarsus 12.4 (.49).

Recognition Marks.—Sparrow size; vinaceous coloring of males; terrestrial habits; the only tiny dove within our limits.

Nesting.—*Nest:* A shallow platform of twigs and grasses; placed at moderate height in bush or tree. *Eggs:* 2; elliptical oval, white. Av. size 21.5 x 16.5 (.847 x .65); index 76.7. *Season:* March–July; also throughout the year in the Imperial Valley (Fortiner).

Range of *Chæmepelia passerina.*—Southern United States and south through the West Indies and Mexico to Brazil and Peru.

Range of *C. p. pallescens.*—Lower Sonoran and Tropical zones, from southeastern California and Lower California east to south-central Texas and south to Costa Rica.

Occurrence in California.—Of common but irregular occurrence in the valley of the Colorado; probably breeds. Casual elsewhere at widely separated stations,

especially in the coastal counties, San Diego, Santa Barbara, Monterey, San Mateo, and San Francisco.

Authorities.—Coues (*Chamaepelia passerina*), Proc. Acad. Nat. Sci. Phila., 1866, p. 93 (Ft. Yuma); *Littlejohn*, Bull. Cooper Orn. Club, vol. i., 1899, p. 73 (Pescadero); *Stephens*, Condor, vol. v., 1903, p. 77 (Ehrenberg, Colo. R.); *Todd*, Annals Carnegie Mus., vol. viii., 1913, p. 534 (monogr.); *Fortiner*, Condor, vol. xxii., 1920, p. 154 (Imperial Valley, breeding; habits); *ibid.*, vol. xxiii., 1921, p. 168 (nesting throughout the year).

WHEN a tiny portion of the landscape, hitherto unnoticed, detaches itself from the ground, and charges with a curious little waddling flight into the nearest thicket, we naturally surmise a new sparrow, and we are not a little amazed to find instead a duodecimo dove; and when the mind has reluctantly accepted this quarter-sized pocket-edition of a dove as a fact, expectation is further defeated by finding not a kittenish approximation of dove-like qualities, a cunning, cuddlesome miniature "too cute for anything," but a prosaic dead-in-earnest grubber of the fields, a self-centered, self-sufficient little dwarf who asks only to be let alone, and who sternly repels all overtures, whether of admiration or condescension. For one I resent this elfin self-sufficiency. What business has an undersized, grown-up squab to maintain such a moral aloofness, to treat us lords of creation as though we were non-existent, or else, when we force the issue of attention, to move off in disdain as though the neighborhood were polluted? In my barefoot days I have seen a bevy of little girls act thus. Perhaps it is the defense of all dwarfs.

The disaffection began, I think, at the mesquite camp where I found a "Mex" Ground Dove's nest five feet up in a bush and not a hundred feet away. I immediately planned portraiture—surely an intended compliment. But as often as any one of us approached within forty feet of that nest the "techy" occupant faced about and sped away. We might sing, we might shout, we might dance if we liked, we might break up lengths of firewood in explosive succession—that was our business; but look at *her* sacred person—never! Finally I contrived a tunnel through the foliage, that I might direct the impartial glass eye upon her and snap her unaware. The portrait of Her Huffiness which, highly magnified, adorns the next page, is the record of my loftiest success.

And yet these birds are among the most familiar visitors about rancherias and clearings. They consume weed-seed and fallen grain wherever found and even mingle with the chickens at morning mess. Singly or in twos or by dozens they seem to show a special fondness for the humble quarters of the Mexican laborers, and it may be they only cherish a special resentfulness against the white race.

Business-like always, the Ground Dove is not less diligent in court-

Taken in Arizona *Photo by the Author*
HER HUFFINESS, THE MEXICAN GROUND DOVE

ship. The call note, *ōō wōō′ uk, ōōō wōō′ uk,* sounds a little hard and unromantic in comparison with that of the larger doves. The sound is very penetrating, but it is so low-pitched that some people fail to observe it. The singer is discreet, and the sound usually ceases upon the appearance of the ever-despicable human. Yet at close quarters with his lady love, the workaday swain knows how to be tender. At such times he trails after his enamorata with trembling wings and cries *kōōl kōōul.* The daily visit to the drinking pool is the recognized occasion for amours. Then discipline relaxes and stern matrons will now and then accept blandishments at which cold reason shudders. But, after all, drinking's the thing, and this, again, is business. The dovelet seeks a shallow edge of mud and thrusts a beak in boldly. Not by the indolent dip and trickle of Chat or Thrasher does she satisfy thirst. No; with beak fully submerged, she drinks in rapid, gainful gulps. Heads up, a significant exchange of glances, and off they whirr with that directness which marks this bird an infallible champion of efficiency—and—tediousness. *Dura et inexorabilis—tu, O Nana!* Also a disappointment.

A Peaceful Moment

Red and Northern Phalaropes in breeding plumage. This peaceful scene, apparently enduring, is but a moment of flood after a crash of surf.

From a photograph by the Author

Taken on the Southeast Farallon

No. 229

Red Phalarope

A. O. U. No. 222. **Phalaropus fulicarius** (Linnæus).

Synonyms.—Gray Phalarope (in winter). Whale-bird. Coot-footed Tringa. Bank Bird (eastern). Sea Goose (eastern).

Description.—*Adult female in summer:* Entire underparts, except lining of wing, purplish chestnut (Rood's brown) with a faint glaucous bloom; a few touches of white ventrally on parted tips of feathers, even in highest plumage; region about base of bill, forehead, and crown blackish plumbeous; sides of head (nearly meeting on nape), axillars, and lining of wings, greater wing-coverts, inner edges of inner tertials, and sides of rump, white; hind-neck, back, scapulars, and upper tail-coverts (centrally) black with buffy and ochraceous edgings, mostly in lengthwise pattern; lesser and middle wing-coverts and rump plumbeous dusky; wing-quills fuscous with white shafts, the inner primaries white-edged basally, and the secondaries extensively white at base; upper tail-coverts black with ochraceous tips centrally, plain cinnamon laterally. *Adult male in breeding plumage:* Similar, but smaller and duller; ventral feathers more extensively white-tipped; black of face largely replaced by ochraceous, and that of crown heavily streaked with ochraceous; white of sides of head persistent over eye only. Bill yellow with dusky tip; feet yellowish dusky. *Adults in winter:* Quite different: Upperparts ashy (deep gull gray) nearly uniform; wing darker ash or blackish, but with white bar as before; head and neck all around white, enclosing a dusky area through and behind each eye, and another on the hindhead; underparts entirely white or ashy—washed on sides only. A transition plumage often observed in the return migrations in August shows mingled black and ashy above and white and chestnut below. *Immature:* Above dull black with ochraceous edgings; wing-coverts, rump, and upper tail-coverts plumbeous,—the first bordered by buffy and the last by ochraceous; remainder of head and neck and lower parts white, tinged with brownish buff on the throat and chest (Ridgway). Length of adult female (av. of 10 skins): 226.6 (8.92); wing 133.7 (5.26); bill 22.7 (.89); tarsus 22.8 (.90). Male smaller.

Recognition Marks.—Towhee size; chestnut coloration of breeding plumage distinctive. In the gray and white autumnal plumage requires careful discrimination from the other Phalaropes. From *Lobipes lobatus* it differs in being much larger, much lighter (gull gray instead of black) above, dusky areas of head much reduced, bill stouter and especially broader. From *Steganopus tricolor* it differs in being smaller, stockier, purer white on breast, more extensively white on head, and especially in having a shorter, stouter bill.

Nesting.—Does not breed in California. *Nest:* A slight hollow in the ground lined with bits of moss and grasses. *Eggs:* 4; deep to dark olive-buff, heavily spotted and blotched with brownish black (dark sepia). Av. size 30.5 x 21.6 (1.20 x .85). *Season:* June; one brood.

General Range.—Northern and Southern Hemispheres. Breeds in Arctic and sub-Arctic latitudes; in North America from the Yukon mouth and central Keewatin north to northern Ellesmere Land. Migrates along both coasts of the United States (casually in the interior) and winters on the oceans south at least to Juan Fernandez and Falkland Islands.

Distribution in California.—Abundant along the coast and off shore during migrations. Of casual occurrence interiorly. Winters sparingly and irregularly off shore from Monterey southward.

Migrations.—*Spring:* Enters State from south in March or early April; attains maximum May 25 to June 3. *Fall:* Stragglers return in late July and August; species becomes common off shore in September; most abundant along shore in November; clears for South by December 5th.

Authorities.—Gambel (*Phalaropus fulicarius*), Jour. Acad. Nat. Sci. Phila., ser. 2, 1, 1849, p. 224 (Monterey); *Grinnell*, Pac. Coast Avifauna, no. 1, 1900, p. 20 (Cape Prince of Wales, Alaska); *Beck*, Proc. Calif. Acad. Sci., ser. 4, vol. iii., 1910, p. 70 (Monterey); *Cooke*, U. S. Dept Agric., Biol. Surv. Bull., no. 35, 1910, p. 14 (migr., distr.); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 33 (s. Calif., occurrence, migr. dates, etc.); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 320.

"SEA GEESE" the Atlantic fishermen call them, and if you can conceive of geese no bigger than your fist, scattered broadcast by thousands over the bosom of the ocean, you will have a fair idea of the general appearance, as well as of the confidence which inspires these remarkable birds. Albeit classed as a "shore-bird," this hardiest species of the Phalaropes spends its entire life upon the water, save as it is driven by stress of weather to seek shelter in the lee of some island or headland, or as it is led ashore by the promptings of the reproductive instinct. Inasmuch as the prevailing winds along our western coast are from the northwest during the spring months, and especially during May, no more favorable opportunity exists for the study of Red Phalaropes during migration than that afforded by the Farallon Islands, some twenty-five miles off the Golden Gate. Here in late spring thousands of these birds ride at anchor in the lee of the main island, along with other thousands of the other northern species, *Lobipes lobatus*. Of these some few scores are driven ashore by hunger and seek their sustenance in brackish pools, or else battle with the breakers in the little "bight" of the rocky lee shore. The date is May 23, and the company under survey numbers a few brilliant red birds in high plumage among scores in unchanged gray, together with others exhibiting every intermediate gradation. When to this variety is added a similar diversity among the Northerns, which mingle indiscriminately with them, you have a motley company—no two birds alike. Ho! but these are agile surfmen! Never, save in the case of the Wandering Tattler and the American Dipper, have I seen such absolute disregard of danger and such instant adjustment to watery circumstance. Here are thirty of these Phalaropes "fine mixed," threading a narrow passage in the reefs where danger threatens in the minutest fraction of a second. Crash! comes a comber. Our little world is obliterated in foam. Sea-anemones and rock-oysters sputter and choke, and there is a fine fury of readjustment. But the Phalaropes rise automatically, clear the crest

of the crasher, and are down again, preening their feathers or snatching dainties with the utmost unconcern. Now a bird is left stranded on a reef, or now he is whisked and whirled a dozen feet away. All right, if he likes it; but if not, he is back again, automatically, at the old rendezvous.

Life goes on right merrily in spite of these shocking interruptions. Food-getting is the main business, and this is pursued with extraordinary ardor. The bird's tiny feet kick the water violently, and there is the tiniest compensatory bob for every stroke, so that their little bodies seem all a-tremble. There seems to be no difference of opinion between the two species, but there is time for a good deal of amatory play between the sexes of the Reds. It is always the bright-colored female who makes the advances, for the wanton Phalaropes have revised Nature's order, and the modest male either seeks escape by flight, or else defends himself with determined dabs. Here is the authentic lady for whom Shakespeare's "pilgrim" sighed:

Taken on the Farallon Ids. *Photo by the Author*

THE NEREIDS

PHALAROPES OF BOTH SPECIES, RED AND NORTHERN, COMPOSE THIS FLOCK

Taken near Santa Barbara *Photo by the Author*

A WAYSIDE WINK

"Oh would my lady had me thus at bay,
To kiss and clip me till I ran away."

The birds are perfectly aware of my presence, and they do not come *too* close, except as a wave breaks over the barrier and sweeps the whole company over toward me. In such case, several of the more timid fly, but most of them cast an eye upward in my direction and determine to take chances. When the birds climb up onto a rock, they totter absurdly and pitch forward helplessly, as if their bodies were surprisingly, as they undoubtedly are unexpectedly, heavy. Not infrequently they fall in this fashion, always pitching upon their faces.

One modest gallant is just taking a bath. Mere sousing by surf is evidently inadequate for this important function, but it needs must have personal attention. The bather therefore tips first to one side and then the other, kicking into the air with the upper foot and scattering spray with the upper wing, while he dips the under one. He changes with incredible swiftness until, his ablutions completed, he rises three or four

Portrait of Red Phalarope, Female

The bird is engaged in the feeding evolutions, performed at the rate of 300 per minute

From a photograph by the Author

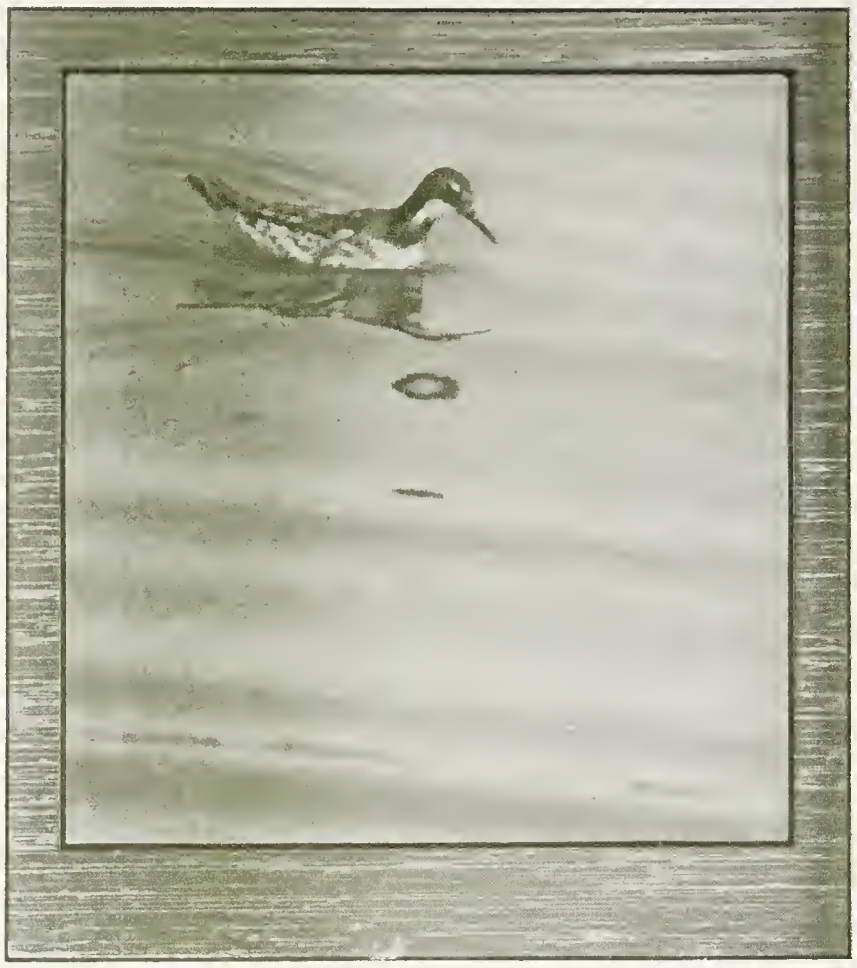
Taken on the Southeast Farallon

feet into the air and shakes himself thoroughly. Interesting as were these evolutions at the tide line, they were soon to be surpassed by experience ashore—as witness the notebook: "Oh, bring me a new dictionary! At least a dozen fresh-minted words I require, caressives, diminutives, and felicitatives. Four Arctic emigrants ticketed for waters in and about the North Pole have adopted me for their god, and there is nothing they will not do for me save keep outside the focal length (about 2½ feet) of my camera. Three Red Phalaropes, all female I take it, although none of them in highest plumage, and one Northern, also a female, just under 'high,' are pasturing at my feet in a brackish pool some 20 feet long, 10 feet wide and 2 deep. The waters of the pool teem with a minute reddish crustacean (?) shaped like an ant, less than a 32nd of an inch in length and incredibly nimble. The insects progress by leaps, and are visible only at the moment of arrival. Yet these birds gobble them up one at a time with unerring accuracy and with a rapidity which is nothing short of marvelous. The Reds work habitually at the rate of five dabs per second, i. e., 300 a minute, while the Northern, with a longer beak and a much daintier motion, works only half as fast." If we pause to analyze the set of motions, or "reactions," involved in this performance, we find for *each* the following order: Kick, whirl, stop, select, strike (that is, secure prey), swallow. Allowing that

Taken in Santa Barbara *Photo by the Author*

FULL SAIL

THE SUBJECT IS A NORTHERN PHALAROPE, AND THE MOMENT IS THAT JUST AFTER ALIGHTING BEFORE THE "SAILS" HAVE BEEN HAULED IN



Taken in Merced County *Photo by the Author*

SPRING CLOTHES

NORTHERN PHALAROPE IN BREEDING PLUMAGE

the first three operations follow in automatic sequence as the result of one volition, we have at least four volitions for each cycle,—twenty per second — rather rapid thinking! "The birds are fast livers, and they void the cloaca at intervals of two or three minutes, roughly guessed. The excreta are chiefly vivid rose red with an attendant portion of pure white—the same in color, by the way, as that cast by the Murres on the east wall of Shubrick point.

"As I said, these birds will do anything for me. By stealthy approach and good behavior I have won their complete confidence, taking all the pictures wanted at focal length, the birds passing repeatedly within that distance as the camera is pointed diagonally down at them. After using up my plates I lay down by the water's edge, and the birds repeatedly came nearer to my face than my hands were. Also when I stretched my hand out slowly into the water, they came within a foot of it, and, once, within six inches. And yet they are perfectly cognizant of the birdman's presence, and give a little start or warning peep every time an unusual movement occurs, or the slightest sound escapes me."

We are told that these birds breed in immense numbers within the Arctic Circle, and that they are invariably found among those breeding farthest north. Their presence, also, is characteristic of open water anywhere in the Arctic Ocean; and it is hailed with delight by whalers as being a good indication of the near presence of some large cetacean, especially of

the Bow-head, or Right Whale (*Balæna mysticetus*), since the birds delight in the same sort of sea-forage as that upon which the whales subsist.

The nature of the Red Phalarope's winter habitat is much less clear. Instead, the bird has surrounded itself with quite an atmosphere of mystery. There are winter records from regions so diverse as our own Monterey, Santa Cruz Island, and San Diego, the west of Chile, San Juan Fernandez, and the Falkland Islands. On the whole, it would appear probable that the species winters upon the open ocean in some unknown tropic latitude, and that it appears on shore only when driven in by storms or when seeking landmarks for the migratory movement. The fall migrations along our coast are very leisurely. Stragglers, presumably those which fell short of the northern goal, begin to appear as early as late July and in August. The pace quickens throughout the autumn months, but the bulk of the species musters from the ocean and feels its way south along the kelp beds only in early November. Thus, we count the birds of regular occurrence at Santa Barbara upon the 7th or 8th of November. Most of the birds have cleared for the southern rendezvous by the tenth of December, but a few linger throughout the season, from Monterey southward.

The return movement of spring is less scattering. Beginning easily in April, it bulks largest during the last week in May and, save for unusual adversities of tempest, has cleared by the 7th of June.

Taken near Santa Barbara *Photo by the Author*

NORTHERN PHALAROPES AND WESTERN SANDPIPERS

No. 230

Northern Phalarope

A. O. U. No. 223. **Lobipes lobatus** (Linnæus).

Synonym.—Red-necked Phalarope.

Description.—*Adult female in summer:* Above and on sides of breast and sides (narrowly) slaty with a drab cast; blackish on back and scapulars, and edged here with light ochraceous; wings brownish black, the greater coverts broadly tipped with white, forming a transverse bar; sides of neck and lower throat rufous,—pure on sides, more or less mixed with slaty gray on throat; chin, upper throat, and remaining underparts entirely white. Bill black; feet yellow, lobate and semipalmate, most extensively between middle and outer toes. *Adult male:* Similar, slightly smaller and of duller coloration, save that the black of back is more decided and the ochraceous edgings of upperparts deeper and more extensive; scapulars, etc., narrowly tipped with white. *Adults in winter:* Without rufous; more extensively white; crown and auriculars (connecting below eye with a similar spot in front of eye) and median stripe of hind-neck dusky gray; the rest white; remaining upperparts blackish (centrally) and dusky or ashy gray, extensively edged and striped with cream-buff and white; wing-bar as before; sides of breast grayish-clouded. *Immature:* Similar to adult in winter, but more black above; breast usually tinged with buffy or brownish. Length 190.5 (7.50); wing 115.1 (4.53); tail 51.3 (2.02); bill 23.1 (.91); tarsus 19.6 (.77); middle toe and claw 20.3 (.80). Males average smaller.

Recognition Marks.—Towhee size; slaty gray, rufous, and white of head and neck in spring plumage; slender, black bill, less than one inch long, with scalloped feet, distinctive in any plumage.

Nesting.—Does not breed in California. *Nest:* A slight depression in the ground, lined with moss and grass. *Eggs:* 4; deep to dark olive-buff, heavily speckled, spotted, or blotched with brownish black (dark sepia). Av. size 29.2 x 20.8 (1.15 x .82).

General Range.—Northern and Southern Hemispheres. Breeds in Arctic latitudes south to the Aleutians, Hudson Bay, and northern Labrador. Winter home unknown, but presumably tropical seas. Occurs broadly over the entire continent during migrations but more commonly coastwise.

Distribution in California.—Of general occurrence during migrations; abundant coastwise or off shore. Small parties of non-breeders sometimes linger through the summer upon interior ponds.

Authorities.—Cassin (*Phalaropus hyperboreus*), in *Baird*, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 706 (San Francisco); *Loomis*, Auk, vol. xi., 1894, p. 27 (Monterey, migr.); *Grinnell*, Pac. Coast Avifauna, no. 1, 1900, p. 21 (Kowak R., Alaska; desc. nest and eggs, habits, etc.); *Fisher*, Condor, vol. iv., 1902, p. 8 (Mono Lake); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 16 (distr. and migr.).

NOTHING can exceed the exquisite grace of this delicate bird as it moves about, not at the water's edge, like other waders which it so closely resembles in appearance, but upon the surface of a pool or even on the bosom of the deep. As it swims, it nods with every stroke, turns at a thought to snatch some floating sea-morsel, or flits away with as

Les Voyageurs

Life for such little folk is one breathless round of adventure

From a photograph by the Author

Taken near Los Banos

Taken in Santa Barbara *Photo by the Author*

ATTENTION!

NORTHERN PHALAROPE IN AUTUMNAL PLUMAGE

little provocation as that afforded the bursting bubble of foam, its late brother. We who dwell by the sea wait eagerly for the reappearance of our confiding little voyageurs, in April or early May, and though our files are already bursting full of "negatives," we shall not cease to pursue this dainty apparition as often as he condescends to visit our brackish pools and shallows.

Truth to tell, the enthusiasm of photographic pursuit often leads the camerist into sorry places. Accustomed though it be to gleaning a living from the surface of the ocean, where everything is "clean," a Phalarope's interest in backwater lagoons or interior waters is directly proportioned to their impurity. Here at Santa Barbara we have a most conspicuous example in the "Estero," which is a stretch of low-lying, flooded barrens near the car shops and the beach. This watery waste receives not only the contributions of ancient springs now polluted by civilization, but also the frustrated waters of the city's outfall sewer, when the tide is over-high. The combined result is a culture medium of a potency to daunt any but the most hardened human explorer, as well as to compel the attendance of even the most wary of avian gourmets. Here

on a day during the August migrations I have seen the tepid waters teeming with "insect" life to a degree almost unimaginable. The upper strata of a six-inch shallow held bugs or wriggling creatures of at least twenty sorts visible to the naked eye; and of these, ten kinds might be distinguished in a single cubic inch. The lowermost stratum seemed a solid mass of living creatures, while the spaces between, though comparably clear to the eyes, must have been crowded with bacterial life adequate to the support of the visible hosts. Into one of these channels of liquid aliment, huge earthen platters containing soup of a richness beyond human desire, come the Phalaropes to feast and fatten. They come after long fasting, perhaps, and as they settle upon the water they begin to rush about like excited schoolboys under a chestnut tree. Each bird gives a grunt of greedy satisfaction between mouthfuls, so that a curious

Taken in Santa Barbara *Photo by the Author*

THE RACE

gabbling chorus, or plunder song, rises. This strange music of the chase is instantly hushed at the approach of danger, and it can be heard to advantage only from behind a screen of reeds or salicornia.

At a table so rich the Northern Phalarope cannot practice the rhythmical swing-and-dip which characterizes the pursuit of food limited to one kind. He soon learns to be fastidious, and plows through lesser provender

unheeding, while with a tense alertness he holds himself ready to launch at a luring morsel. Now and again the bird will rise, with a vigorous stroke of the foot, and give a little half-somersault, like a diving grebe, save that the lurch is forward rather than down.

Taken in Santa Barbara *Photo by the Author*

AN EAGER QUEST

Whether or not the Northern Phalarope sometimes turns all the way around, as does the Wilson—"spins like an automatic teetotum," as Chapman has it—I am unable to say. All I can say is that in many hours of watching in both summer and fall I have never seen it do so. But the testimony of Messrs. Bowles,[1] Chapman,[2] and Nichols,[3] seems explicit and conclusive on this point, and we are left to admit the comparative worthlessness of negative evidence.

Northern Phalaropes are conspicuous as migrants throughout California both in fall and spring. They are of regular occurrence upon interior waters, as well as along the coast, though they are perhaps somewhat less in evidence upon fresh water in the fall than in the spring. They are great loiterers, and the belated appearance of flocks comprising individuals in full breeding plumage is one of the local puzzles of bird migration. Although they should report in at the northern breeding grounds not later than June 15th, they have been seen at Santa Barbara on the 16th of June (1911, Bowles), at Los Angeles up to June 19th (1897, H. Swarth), and at Goose Lake in Modoc County on June 24th (1912, Dawson).

[1] The Shore Birds of Santa Barbara, by J. Hooper Bowles and Alfred B. Howell: *Condor*, Vol. XIV., Jan., 1918, pp. 6, 7.
[2] Frank M. Chapman in Bird-Lore, Vol. VII., p. 274.
[3] John Treadwell Nichols in discussion at the Thirty-third Meeting of the A. O. U., San Francisco, May 19, 1915.

If these creatures usually have as much difficulty in making up their mind to a certain course of action as did a flock I once observed at Santa Barbara, their tardiness may be more easily accounted for. A flock of about forty birds sighted over Laguna Blanca on the 29th of May, 1915, required about fifteen minutes to decide which particular spot of forty similar acres to settle on. But the birds were no sooner down than a Coot put them to flight; and it was all to do over again. Not less than two hundred times did this aggregation of incompetents weave to and fro before anything decisive was brought to pass.

A study of the evolutions of this nonplussed flock raised many questions which the doctors of psychology are not yet prepared to answer. What is the basis of leadership in flock movements? Is there a flock impulse, or a common consciousness? Are flock decisions put to vote? If so, does the majority rule? Or is unanimity necessary to social action? There is no one to tell us.

It was noteworthy, in this case, that the flock did not describe an actual circle in flight, but that it (that is, *each individual* of it) reversed, about-faced sharply, at the end of each tack. The course of the flock was, therefore, roughly lens-shaped or fusiform. This evolution is more difficult than a blind follow-your-leader turn, and one marvels at the signal code, be it visible, audible, tactile, or psychical, which guarantees an instant rebound of forty feathered bullets without catastrophe.

Taken in Santa Barbara *Photo by the Author*

WALTZ TIME

The Race

Northern Phalaropes on the Estero

From a photograph, Copyright 1913, by W. L. Dawson

Taken in Santa Barbara

Of the countless myriads of dainty voyageurs which do succeed in reaching the high north, there is no better account given than the classical report of E. W. Nelson:

"The female of this bird, as is the case with the two allied species, is much more richly colored than the male and possesses all the rights demanded by the most radical reformers.

"As the season comes on when the flames of love mount high, the dull-colored male moves about the pool, apparently heedless of the surrounding fair ones. Such stoical indifference appears too much for the feelings of some of the fair ones to bear. A female coyly glides close to him and bows her head in pretty submissiveness, but he turns away, pecks at a bit of food, and moves off. She follows, and he quickens his speed, but in vain; he is her choice, and she proudly arches her neck, and in mazy circles passes and repasses before the harassed bachelor. He turns his breast first to one side and then to the other, as though to escape, but there is his gentle wooer ever pressing her suit before him. Frequently he takes flight to another part of the pool, all to no purpose. If with affected indifference he tries to feed, she swims along side by side, almost touching him, and at intervals rises on wing above him, and, poised a foot or two over his back, makes a half a dozen sharp wing strokes, producing a series of sharp whistling noises, in rapid succession."

Taken in Santa Barbara *Photo by the Author*

A BAND OF DRESSPARADOES

No. 231

Wilson's Phalarope

A. O. U. No. 224. **Steganopus tricolor** Vieillot.

Description.—*Adult female in summer:* Top of head and upper back pearl-gray; nape and upper tail-coverts white; a white supraloral line, and a narrow patch of white below eye; a black stripe, starting from before eye, passes backward, becoming broader on side of neck, changes to deep chestnut on hind-neck, and, continuing backward over shoulder, is interrupted and dispersed over the scapulars; rump and wings grayish brown, the latter with a very little white edging; tail still lighter brown; a reddish brown wash across throat and chest and sometimes sides, as though the coloring matter of the hind-neck had "run"; remaining underparts pure white. Bill black; feet brownish. *Adult male in summer:* Similar to female but smaller, lacking the pearl-gray and chestnut,—slaty-gray and rusty instead; general appearance of back and wings brownish gray, with blackish centers of feathers and some ochraceous edging; black on sides of head and neck almost obsolete; rufous tinge of chest very slight; sides of breast and sides grayish brown. *Adults in winter:* Above plain ash-gray; upper tail-coverts, superciliary stripe, and lower parts white, the chest and sides of breast shaded with pale gray. *Young:* "Top of head, back, and scapulars dusky blackish, the feathers distinctly bordered with buff; wing-coverts also bordered with pale buff or whitish; upper tail-coverts, superciliary stripe, and lower parts white, the neck tinged with buff" (Ridgw.). Measurements—average of 6 females from Modoc Co. and Humboldt Co., Nevada: length (skins) 238.6 (9.40); wing 130.6 (5.12); bill 33.5 (1.32); tarsus 32.6 (1.28). Av. of 6 males from the same localities: length (skins) 218 (8.59); wing 120 (4.73); bill 30.3 (1.19); tarsus 31.9 (1.256).

Recognition Marks.—Towhee to robin size; pearl-gray, chestnut, and black in masses distinctive in adult female. This bird superficially resembles the preceding in some of its plumage; its larger size and especially longer bill and larger feet, as well as really different color pattern, should be noted.

Nesting.—*Nest:* A rude platform of bent grasses buried in grass on damp ground or near water. *Eggs:* 3 or 4; pointed ovate, pale to deep olive-buff, usually with a yellowish tinge, i. e., inclined toward clay-color, spotted finely and heavily with black or brownish black—or, rarely, warm sepia. Av. of 27 eggs in M. C. O. coll.: 31.75 x 23.1 (1.25 x .91); index 72.8. *Season:* May; one brood.

General Range.—Temperate North America, chiefly west of the Great Lakes, south in winter to Argentina, Chile, and the Falkland Islands. Breeds from northern Washington, Alberta, Saskatchewan, and Manitoba, south to central California, southern Colorado, southern Kansas, and northwestern Indiana. Appears in eastern states and Canadian provinces during migrations, and upon the Pacific Coast from southern British Columbia. Winters south of the United States and through South America.

Distribution in California.—Fairly common spring and fall migrant at suitable stations, and appearing coastwise from Santa Barbara south. Breeds sparingly east of the Sierras from Bishop in Owens Valley north to Goose Lake and west to Klamath Lakes; also in the Los Banos section.

Authorities.—Coues (*Phalaropus wilsoni*), Ibis, 2nd Ser., ii., 1866, p. 263 (Colo. R.); *Townsend*, Proc. U. S. Nat. Mus., vol. x., 1887, p. 198 (Lassen Co., June); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 18 (distr. and migr.); *Bowles*, Auk, vol. xxviii., 1911, p. 171 (Santa Barbara); *Ray*, Condor, vol. xv., 1913, p. 111 (Tahoe; desc. and photo of nest, eggs); *Grinnell, Bryant, and Storer*, Game Birds Calif., 1918, p. 332 (desc., occurrence, habits, etc.).

OF ALL birds wearing feathers—and that's exactly all of them, since the Grecian plucked a rooster to make "Plato's man"—the Wilson Phalarope is the most exasperating. This is a harsh judgment to pass on so gentle a bird, and argues a certain narrow-mindedness,—a narrow-mindedness which the author hastens to admit, for it is that of the now nearly extinct genus, oölogist.

Our first encounter with the Wilson Phalarope befell in a northern swamp on the 1st of June, 1905. We had been wading in hip boots after Western Grebe portraits, and had reached that point just off shore where the boots ceased to splash, but still made a noise like bovine osculation, when we came upon four Phalaropes, two MALES and two FEMALES. The females of *this* species are the original militant suffragettes. But they are no

Taken in Inyo County *Photo by the Author*

A NESTING HAUNT NEAR BISHOP

Taken in Modoc County *Photo by the Author*

WILSON PHALAROPE, MALE AND FEMALE, A-WING

longer militant. They do not have to be. They have arrived. It is sober truth to say that these sturdy pioneers of feminism have assumed all the functions of leadership, including that of courting, and that they have delegated to the males all domestic cares and responsibilities, save that of laying eggs.

These birds before me were evidently paired and, as manifestly, had local attachments for that particular stretch of grass and weeds and ooze. One pair lit near me as I was photographing a Black Tern's nest, and the male began to poke about in the reeds, like a hen that has forgotten, or pretends to have forgotten, the precise location of her nest. The female dogged his steps and he occasionally chased her off in a petulant way, precisely as a female of any more rational species would have done under like circumstances. Finally, the male housewife disappeared in a certain clump toward which he had already twice feinted. The female came to a standstill and mounted guard for as much as ten minutes. The situation was perfectly clear from an oölogical standpoint. The eggs were being covered until it suited my pleasure to claim them. Imagine my surprise, therefore, when the female suddenly flitted over the weeds to a more distant clump, to which her dutiful spouse had sneaked, routed him out and made off with him to parts unknown.

On succeeding days I raked that neck of the swamp with a fine-toothed comb, but all to no avail. The birds came and went without rhyme or reason, now one, now two, and now all four at once, from I knew not where, and disappeared again as mysteriously. If they lighted, the reeds swallowed them up; if they flew, they did it in a demure way which was a rebuke to curiosity. In flying, a bird would sometimes give voice to its disquiet in a sort of hoarse, barking note, a rough monosyllable, *wib*, which was also occasionally subdued to a mellow croak, *oont*. This was often a summons, and if uttered by a single bird aloft, would serve to rouse its mate from some recess of the grass; whereupon both would flit away, as though renouncing all claim to that locality.

As it happened once, so it happened a dozen times; and a like experience befell not only upon each of two succeeding Junes, but it has been practically repeated every season since, where Wilson Phalaropes have been encountered at all. Others testify to the same experience. Mr. Robert E. Rockwell, writing of the Barr Lake region, in Colorado, declares this Phalarope to be "the most baffling bird as regards nesting habits with which our field work has brought us in contact."[1] He says further: "That the nests are wonderfully well concealed both through protective coloration of the eggs and through the cunning of the parent

Taken in Fresno County *Photo by the Author*

AN ANXIOUS FATHER

birds, is beyond question; yet this alone would hardly explain our lack of success in finding the nests; for had the birds been actually nesting in the numbers their relative abundance would seem to indicate, it would hardly have been possible for us to fail in our search so consistently." And he offers the suggestion that the local summer population contains a large admixture of non-breeding birds who, nevertheless, evince an interest in

[1] Condor, Vol. XIV., p. 122.

Taken in Fresno County MR. WILSON AT CLOSE RANGE *Photo by the Author*

family affairs. The suggestion is worthy of consideration, for it may well be that a society which has evolved females in pants has also produced a goodly number of bachelor-maids and complacent aunties, not to mention fortunate males who have managed to escape the wiles and blandishments of the ardent sex.

That the male who has once taken the veil does not shirk thenceforth the arduous duties of paternity, we have most emphatic proof. The male bird not only incubates the eggs, but has sole care of the chicks when hatched. While in camp at Goose Lake, in 1912, I found that young Phalaropes were moving about and hiding in the grass by the 25th of June. The male birds danced close attendance upon our movements and showed every extravagance of solicitude; but the females merely looked in occasionally, once in ten minutes or such a matter, to see that their worser halves were giving proper attention to their duties in the nursery, and then returned, content, to the distant club-room. One distraught father I nearly seized in his abandon of grief. Again and again he cast himself down in the grass and put on agonies both of distress and invitation, with tones varied to suit. His chief pose was to stand with head and breast depressed to the ground and with tail elevated so as to show the white underparts conspicuously. At other times he would rise clear of the grass a-wing and fall back again and again as though quite exhausted. Withal he was such a pale, pathetic, and manifestly overworked household drudge that one felt quite ashamed to add to his burdens. The situation wrought upon the nerves. Here at the best was Topsy-Turvy Town; and a mere man, alone, and unattended, had fearful forebodings of what might befall him—in California.

During the fall migration Wilson Phalaropes appear in considerable numbers about our southern ponds and brackish shallows. While they, too, resort to the surface of the water, they are rather more given to wading or running about on shore, in company with Sandpipers. But one who

Alert

This male Wilson Phalarope is guarding the seclusion of his brood

From a photograph by the Author

Taken near Los Banos

is fortunate enough to encounter a company of these birds on the water has a treat in store. Instead of swinging from side to side with a rhythmical motion, as do the "Reds" and "Northerns," the Wilson whirls all the way around. Moreover, he keeps on whirling, and though he pauses for the fraction of a second to inspect his chances, he goes on and on again like an industrious, mad clock. One bird which I had under the binoculars turned completely around 247 times in one spot, without stopping save for instantaneous dabs at prey. These dabs were directed forward or backward, i. e., with or against the direction of the body motion. A single gyration normally contains two such minute pauses, accompanied by a hitching motion of the head; and these are evidently the periods of maximum attention, since they are followed by, or rather flow into, the prey-stroke, if game is sighted. "Game" is not always abundant nor certain, and I have seen a bird whirl a dozen times without a single stroke.

Most interesting of all is the probable fact that each bird has his habitual direction of revolution, clockwise or anti-clockwise, but not both. One would think that the whirling dervishes, at least he of the 247

Taken in Inyo County *Photo by the Author*

NEST AND EGGS OF WILSON PHALAROPE

stunt, must needs unwind; but no, when he resumed his task a moment later it was to continue anti-clockwise.

It is a bewildering sight to see two or three of these birds operating in close proximity, and close attention is enough to develop pink mice on the retina.

The foregoing account was written in 1914. Having been privileged to spend the seasons of 1916, 1919 and 1922 in more or less intimate contact with this species upon its breeding grounds, I am moved to record additional data.

We have already acknowledged that Mrs. Wilson wears the breeches, and that she is more inclined to club life than she is to household cares. The case is, however, much more serious than we had at first suspected. I owe the original intimation of the true state of affairs to Mr. A. O. Treganza, the veteran oölogist of Salt Lake City; and subsequent investigation of my own has abundantly confirmed his claims. Mrs. Wilson is a bigamist. Not occasionally, and of course not invariably, but very usually *she maintains two establishments*. Now that attention is called to it, we see that our note-books are full of references to female Phalaropes seen in company with two males. The association cannot be accidental, for we are in the very midst of the breeding season. The males, frightened by our presence in the swamp, and not daring to remain longer upon their eggs, have sought the comforting presence of the head of their house. The three take counsel together, and it is only when the redoubtable lady announces that the way is clear, that the dutiful cuckolds trail off to their nests.

On the 6th and 7th of June, 1922, our M. C. O. party of three members gave close attention to a swamp in Long Valley, southern Mono County, at an altitude of 7000 feet. We took eleven sets, of four eggs each, of the Wilson Phalarope, and we noted a distinct tendency of the nests to group themselves in pairs. In only one instance, however, were we able to trace clearly a connection between two occupied nests. These two, containing heavily incubated eggs, were situated only 42 feet apart, and the two males who were flushed from them by a surprise coup of ours joined themselves immediately to the only female who had shown any solicitude concerning this section of the swamp.

The extraordinary state of affairs herein divulged is probably both cause and effect. According to a physician friend of Mr. Treganza's, who, pending the completion of his studies, desires his name withheld, the females of Wilson Phalarope are excessively afflicted with diseased ovaries. Thus, hundreds, perhaps thousands, of non-breeding females are found during summer in the vicinity of Salt Lake, and examination shows that invariably these non-breeders are possessed of diseased and non-function-

ing organs. As a result of this condition, which affects perhaps two-thirds of the entire number of females, the males, if they would breed at all, must accept at least one rival, or male partner, in their family relation.

But one who knows Phalaropine character soon suspects that this ovarian disease, which is forcing polygamy upon the race, is itself an effect rather than a cause. The cause is the excessive development of the sex instinct in female Phalaropes. The female of *Steganopus tricolor* is a wanton whom no reasonable indulgence will satisfy. It is a commonplace of the nesting swamps to see two, three, or even four females pursuing a single male with amorous intent. And the harassing pursuit is taken up all the more vehemently after the eggs have hatched, when the male has ceased to think of passion, and is devoted to the care of a growing family. It is, without doubt, this strange excess of *libido* which has brought the females of the species first to their husky perfection of size and power, and then, lacking outlet, has deranged the sex organs themselves.

That this weakness is one of long-standing is further evidenced by the fact, based on embryological studies, that the infant females of *S. tricolor* outnumber the males, three to one. Of six infant daughters, that is, born in a season to Mrs. and the Messrs. *Steganopus*, only one will be sufficiently restrained to breed successfully, and she, in turn, will produce annually, two decorous males (destined for the harem), one lusty brood-hen and five hopeless wantons. I submit that this is the most instructive example of avian depravity ever brought to light.

No. 232

American Avocet

A. O. U. No. 225. **Recurvirostra americana** Gmelin.

Description.—*Adult in summer:* Head and neck all around and breast light cinnamon-rufous (shading from pale pinkish buff to cinnamon, or from vinaceous buff through avellaneous to wood-brown); eye-ring white; region about base of bill whitish; wing-quills and coverts (except inner secondaries and tips of greater coverts) deep brownish black; back, inner scapulars, and inner quills, lighter brownish black; remaining plumage, including outer scapulars, rump, tail, etc., white (tail tinged with ashy). Bill long, slightly recurved toward tip, black; legs dull blue. *Adult in winter:* Similar, but without cinnamon-rufous—white instead; tinged with pale bluish ash, especially on top of head and hind-neck. *Immature:* Like winter adult, but hind-neck touched with rufous; scapulars, etc., buffy-tipped, or mottled; wing-quills tipped with whitish. Av. of 10 Los Baños specimens: length (skins) 409.3 (16.11); wing 231.7 (9.12); bill—chord of culmen 92.6 (3.645); tarsus 95.1 (3.74).

Recognition Marks.—Crow size; long legs; black and white and cinnamon-rufous in masses; long, slightly or strongly *upturned* bill.

Nesting.—*Nest:* A slight platform of weathered reeds or plant-stems on damp

Taken in Merced County *Photo by the Author*

BROADSIDE
PORTRAIT OF AMERICAN AVOCET

ground in or near swamp. *Eggs:* 4, 5 of record; ovate or elongate ovate; pale clay-color (between chamois and dark olive-buff), very uniform, boldly, finely, uniformly, and rather heavily spotted with brownish black (dark sepia), washing out to Saccardo's umber. Av. of 29 eggs from Los Banos: 48.1 x 32.9 (1.894 x 1.296); index 68.4. *Season:* April 20–June 1; one brood.

General Range.—North America, chiefly west of the Mississippi River. Breeds from eastern Washington, central Alberta, and Manitoba (formerly to Mackenzie), south to southern California, southern New Mexico, and southern Texas, northern Iowa and central Wisconsin. Winters from southern Texas to Guatemala.

Distribution in California.—Breeds commonly in the Sacramento and San Joaquin valleys, and in the Modoc region; less commonly (formerly abundantly) in the San Diegan district. Of more general distribution during migrations, appearing coastwise from San Francisco south. Of casual occurrence in winter, recorded as far north as Stockton and Marin County, and at Lone Pine, Inyo County (Nelson).

Authorities.—Vigors (*Recurvirostra occidentalis*), Zool. Jour., iv., 1829, p. 356 (San Francisco; winter plumage); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35,

1910, p. 19 (distr. and migr.); *Lamb and Howell*, Condor, vol. xv., 1913, p. 117 (Buena Vista Lake, breeding); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 24 (San Joaquin Valley, habits, etc.).

ODDITY in a bird makes both for distinction and extinction. Everybody has seen pictures of the Avocet, with its curiously upturned beak and its long blue legs; and almost everybody has received the impression that it is one of the doomed races, a marvel of the elder time. While it is true that the bird is no longer to be found east of the Mississippi River; and that the species as a whole has been reduced to perhaps one-tenth of its former numbers; it has, nevertheless, been fortunate in finding extensive asylum in the central valleys of California; and here it may be studied today as of yore, to every advantage.

Taken in Merced County *Photo by the Author*

A DECORATED MIRROR FOR MILADY AVOCET

Taken in Merced County *Photo by the Author*

THE BELT OF ORION

The requirements of the Avocet and of its still more curious fellow wader, the Black-necked Stilt, are somewhat exacting. They require considerable stretches of shallow water as a field of operations, and low-lying islands, or mud reefs, for nesting, where they may at least be free from the depredations of wolves and wild-cats. If to these be added bordering stretches of pasture land or alkaline waste, and diversification of cattails and tules in the deeper waters, so much the better. These conditions are fairly met on the shores of a dozen of our larger lakes, Tulare, Honey, Klamath, and the rest, but best of all in the grazing country tributary to the Mendota Canal system, and, typically, at Los Baños in Merced County. Certain great stretches in this region are annually flooded with the excess of the Sierran snows, and the flooding is controlled in a sort of alternating rhythm to provide forage for the cattle of the great Miller and Lux Corporation. The magic touch of water following its expected channels quickens an otherwise barren plain into a paradise of avian activities. Ducks of six or seven species frequent the deeper channels; Coots and Gallinules and Pied-billed Grebes crowd the sedgy margins of the ponds; Herons, Bitterns, Ibises, and Egrets, seven species of *Herodiones*,

Great Scissors!

American Avocet, a mother bird in earnest expostulation

From a photograph by the Author

Taken near Los Banos

all told, occupy the reedy depths of the larger ponds or deploy over the grassy levels. Rails creak and titter, Red-wings clink, Yellow-headed Blackbirds gurgle, wrangle, and screech; while the Marsh Wrens, familiar spirits of the maze, sputter and chuckle over their quaint basketry. The Tricolored Blackbirds, also, in great silent companies recruited from a hundred acres, charge into their nesting covert with a din of uncanny preoccupation. Over the open ponds Black Terns hover, and Forster Terns flit with languid ease. The Killdeer is not forgotten, nor the Burrowing Owl, whose home is in the higher knolls; but over all and above all and through all comes the clamor of the Black-necked Stilt and the American Avocet. The Avocet is outnumbered, three to one, by his lesser kinsmen, but I have seen a dozen pairs in a single field and three score in a day's roaming; and I have seen isolated pairs a mile from their fellows.

The Avocets are not rigidly gregarious; they associate freely, however, upon the nesting ground, and are to be seen in small scattered groups as often as singly. Since the tones of the surroundings are chiefly wrought out in gray-greens, grass-greens, and pale blues, the birds have no recourse to the arts of protective coloration, but appear boldly in a garb of black and white, softened on head and neck by cinnamon-brown, and this habit serves to keep them ever before the eye, the observed of all observers.

Taken in Washington *Photo by the Author*

HOISTING THE SIGNAL OF DISTRESS

Because of this prominence, the birds are very sensitive to espionage while they are on their nests, and will flush at a hundred or even two hundred yards. An automobile, however, is less feared than a man on foot, and I have found it the surest way to locate their nests in a difficult country to study the landscape with 8-power glasses from the seclusion of a covered machine.

These birds are not only waders, but swimmers and flyers as well,

Taken in Washington *From a photograph, Copyright 1906, by W. L. Dawson*

THE APPEAL TO PITY

and they show little preference among these modes of activity. If you approach a wading Avocet a little too closely, he may walk off with dignified carelessness; and if the retreating bottom takes him beyond his depth, he is instantly at ease upon the water and swims off, duck-fashion, with keel held low in front, now glancing at you over one shoulder and now over the other. Or else, either from land or water, he takes quickly to wing, letting the long legs first dangle and then straighten out behind him as he progresses. Rising is thus a bit awkward, and in settling, also, the legs must first be brought forward to engage the surface of reef or pool before the wing motion ceases. In flight the motion may be either fairly rapid or quite leisurely, according to whether the bird is frightened

or merely curious; while at sailing he is a passed master, the neck and bill being outstretched to fullest capacity to offset the long rudder of the legs.

How exactly fitted these handsome creatures are to their somewhat unique environment, may not be fully realized until one attempts to wade through their oozy haunts. The bottom here may be very treacherous, with frequent concealed pitfalls and subaqueous passages. In wading a northern swamp after Avocets both my companion and myself shipped water in our hip boots repeatedly, in spite of the greatest precaution; and once I went into a hole so neatly, with both feet, that I had a momentary vision of total disappearance, and shouted in terror. Fortunately, however, the sides held when my outstretched hands met them. But the bird is prepared to meet any inequality of bottom, since it does not fear submergence, and its legs are carried at a slight angle, that is, divergent, to preserve the equilibrium and guard against sudden surprise.

In feeding along the water's edge, or at moderate depths, the Avocet does not dabble at random, but sees and snatches its prey from the surface of the water with great agility, assisting the passage of the morsel down the long bill by a quick forward thrust of the head. Once, however,

Taken in Merced County *Photo by the Author*

ANOTHER SOLICITOUS MOTHER

"IN DEFENSE. . . THE MOTHER AVOCET WILL DO HER UTMOST"

I noted an entirely different method of procedure. It was on the lagoon at Sandyland, near Santa Barbara, where the shallow tide pools contained a multitude of tiny fish fry. These an Avocet endeavored to secure by a rapid sweeping motion of the bill. The bill was partly immersed with the mandibles apart, and the swinging motion had a rapidity and regularity about it that seemed almost aimless; but the bird paused now and then—as often, apparently, as it felt a promising contact—and made a quick grab, with only occasional success. In advancing, at forage, the leg is withdrawn quickly along the line of the tarsus, with folded or collapsed foot, and thrust forward again in such fashion as least to disturb the ooze at the bottom.

As is not, perhaps, so generally known, the Avocet is also a ready diver, or, more accurately, dabbler, since it feeds from the surface of the water with the tipping motion characteristic of some of the ducks. In this operation, the legs are not at all exposed, but only the tail and the rump, the legs being evidently required under water to maintain the vertical position. In dabbling, the birds must depend altogether upon the sensitiveness of the bill, for the water becomes too much disturbed for vision. The confidence in strangers sometimes exhibited by these birds in carrying on their diving operations is very flattering; and one only wishes that it had been uniformly deserved during the years which have so sadly reduced their numbers.

Avocets are rather noisy when disturbed or threatened, but are not

especially so at other times. Their notes consist chiefly of simple shrill cries, neither very musical nor yet strident, "*crick-crick-crick-crick*" or *creek-creek*—something, in fact, after the order of the Curlews, with many excited quaverings beside.

It is, however, when its nest is threatened that the bird displays its utmost charms. It is anxious at the outset to distract attention, even before discovery of the eggs is certain; and as one pokes about in a flat-

Taken near Los Banos *Photo by the Author*

YOUNG BLADES

bottomed boat or canoe, a half dozen of them at once may be seen hoisting signals of distress, and inviting pursuit. One example may suffice. With splendid light and well equipped for photographic appreciation, we put the canoe against a tiny reef upon which we saw a nest with three eggs. The mother bird had flushed at a hundred yards, but seeing our position she flew toward us and dropped into the water some fifty feet away. Here she lifted a black wing in simulation of maimed stiffness, and flopped and floundered away with the aid of the other one. Seeing that the ruse failed, she ventured nearer and repeated the experiment, lifting now one wing and now both in token of utter helplessness. After a while the male joined her, and we had the painful spectacle of a crippled family, whose members were uttering most doleful cries of distress, necessitated apparently by their numerous aches and breaks.

Taken in Merced County *Photo by the Author*

A VENTURESOME INFANT

Once, for experiment's sake, we followed, and the waders flopped along in manifest delight, coaxing us up on shore and making off through the sage-brush with broken legs and useless wings. But we came back, finding it better to let the birds make the advances. Mr. Bowles hit upon the scheme of splashing gently in the water, and it served admirably to excite the birds and make them reckless; and the click,

Taken in Washington *Photo by the Author*

NEST AND EGGS OF AMERICAN AVOCET

click of the camera was sweeter music in our ears than the explosion of death-dealing cartridges before a band of elk.

The birds were driven to the very limit of frenzy, dancing, wing-trailing, swaying, going through last convulsions and beginning over again without regard to logical sequence, all in an agony of effort to divert attention from those precious eggs. It may seem cruel to have harassed them so, but we were sustained by the integrity of our purpose, which was not robbery, but snap-shottery; and we neglected no opportunity to work upon their feelings. Neighbors came up and looked on sympathetically, or joined in the clamor.

As time elapsed, however, the color of the play changed. Finding that the appeal to cupidity was of no avail, the birds appeared to fall back upon the appeal to pity. Decoying was useless, that was plain; so they stood with upraised wings, quivering and moaning, in tenderest supplication. It was too much even for conscious rectitude, and we withdrew, for once, abashed.

But if one fancies that the Avocet's repertory either of cajolery or abuse is exhausted in defense of her eggs, he should wait until a chick is

Taken in Merced County *Photo by the Author*

COUSINS: BABY AVOCET (in lead) AND BABY STILT

discovered freezing in the grass. He is an engaging little fellow, as dutiful as Casabianca, and as gentle as Pity's self. Bidden to remain quiet, he will not accept even the rudeness of the discovering hand as an excuse for disregarding the parental inhibition. I have lifted from the ground and placed upon the water a "frozen" chick which suffered itself to be blown about like a fallen rose-leaf rather than betray the slightest sign of life. In defense of such a child it is no marvel that the mother Avocet will do her utmost. The bird in the picture on page 1198 has hurled herself from the sky repeatedly, as though to dash out her brains on those of the baby's captor; but each time she has deftly swerved at the crisis, and has gone back to repeat the operation. Yet this same mother, a few moments later, has changed the line of attack and is doing off a skirt dance with all the seductiveness of a Pavlowa. *Varium et mutabile semper femina.* Another actress I cannot forbear to mention, for she (correctly) divined our oölogical proclivities. Instead of making a great disturbance and so inciting us to the discovery of her hidden chick, she retired to a discreet distance and crouched ostentatiously in the incubating posture upon imaginary eggs—sat there motionless, too, for a considerable stretch of time, thus truly simulating nature instead of over-acting, and "teetering," as both the Killdeer and the Oystercatcher are so prone to do in like circumstances.

Taken near Los Banos *Photo by the Author*

KEEN TO BE OFF

BABY AVOCETS OF THIS SIZE ARE THE MOST WIGGLESOME CREATURES IMAGINABLE

The Skirt Dance

A phase of the decoy tactics

From a photograph by the Author

Taken near Los Banos

Nesting at Los Baños is conducted in May. Young birds are normally astir by the 20th of that month; but there are many disasters incident to changes of water level or to predatory animals. Second nestings are attempted in case the first is lost, and family cares are sometimes protracted into July. Nests, at their worst, may consist of a mere depression in the dry earth, around which a few broken twigs have been gathered; at their best, a soft cushion of dried reeds or grasses, carefully culled, may support the four eggs. The birds affect a sort of puritanical simplicity, and will usually employ a single sort of material even where many are available. The birds are sometimes called upon to meet the exigency of rapidly rising water, although they are not quite so clever at it as are the Stilts, and I have seen drowned-out nests. With the approach of the water the wise ones gather succulent vegetation or pluck grass-roots, earth and all, and force it under the eggs. In this way they will erect a truncated cone several inches in height, and often succeed in escaping the inundation. One monumental nest I found on the 3rd of June, 1914, which supported eggs in the very act of hatching, above five inches of water. There was quick wit and true!

Taken in Merced County *Photo by the Author*

NEST AND EGGS OF BLACK-NECKED STILT

No. 233

Black-necked Stilt

A. O. U. No. 226. **Himantopus mexicanus** (Müller).

Description.—*Adult male in breeding plumage:* Black-and-white. Underparts, including axillars (but not lining of wings), face nearly to eye, forehead, a blotch below and behind eye, sides of cervix (invading black), lateral and upper tail-coverts, and rump, white, suffused on throat and breast in varying proportions by dull pinkish (pale vinaceous buff); tail pale gray, brownish gray, or dusky; remaining upperparts, including lining of wings, lustrous black with greenish reflections. Bill, bent slightly upwards at middle, black; iris carmine; feet and legs bright red (drying yellowish), nails black. *Adult male at other seasons:* Without pink flush of underparts. *Adult female:* Similar to adult male, but without pinkish flush, and black of back and scapulars replaced by sooty brown. *Immature:* Like adult female, but black of back, etc., bordered, and that of head and neck finely mottled, with dull whitish or buff. *Downy young* are mottled ochraceous buff and black above, clearer buffy below. Measurements: length about 381 (15.00); wing (av. of 10 Berkeley specimens) 228.8 (9.01); bill 64.9 (2.555); tarsus 109.3 (4.30); exposed portion of tibia 70.5 (2.775). The total length of the legs, the "stilts" proper, represented in a series of 16 skins, is very variable, 160–250 (6.30–9.85) (exposed portion, including outstretched toes), the females inclining to the smaller and the males to the larger of these dimensions.

Recognition Marks.—Tern size, but appearing larger; long legs and black-and-white coloration distinctive.

Nesting.—*Nest:* A simple platform of weathered weed-stalks and grasses, on ground near marsh, or else a pyramid of such materials built up out of shallow water. *Eggs:* 4, 5 of record; dark olive-buff, with a yellowish or greenish tinge, boldly spotted or vermiculated and blotched with black and, rarely, a little sepia. Av. of 48 eggs (including 4 sets of 5 from Los Banos) in the M. C. O. coll.: 42.9 x 30.5 (1.69 x 1.20); index 71. The longest egg measuring 44.96 (1.77) is .51mm (.02) shorter than the shortest Avocet egg (see under Avocet); so that these two eggs are almost certainly distinguishable under any circumstance.

General Range.—Warm temperature North America, Middle and South America, to Amazonia and Peru. Breeds in suitable localities nearly throughout its present range. Breeds from central Oregon, southern Idaho, and southern Colorado, southward; also from the coast of South Carolina southward through Georgia, Florida, and the West Indies. Formerly bred north to New Jersey. Winters from southern Lower California, southern Texas, Louisiana and Florida southward.

Distribution in California.—Common summer resident in interior sections, especially the San Joaquin-Sacramento Valley, and in the Modoc district. Also breeds in interior sections of the San Diegan district; formerly in brackish coastwise marshes,—Oceanside, Nigger Slough, the Estero (Santa Barbara), etc. Occurs more widely during migrations, appearing coastwise north to Marin County.

Authorities.—**Gambel** (*Himantopus nigricollis*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 224 (Santa Barbara); *Coues*, Birds of the Northwest, 1874, p. 462 (syn., desc., habits, etc.); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 25 (San Joaquin Valley; habits).

Japanesque

Black-necked Stilts at Laguna Blanca

From a photograph, Copyright 1923, by W. L. Dawson

AFTER ALL, to our human judgment, the outstanding feature of bird life is its marvelous diversity. From the Hummingbird, which weighs a few scruples and is so adroit of wing that it can fly backward, to that waddling avian pig, the Dodo, which weighed six stone and couldn't fly at all, is indeed a far cry. But the contrast afforded here is no isolated example of difference in the bird world. Indeed, there is no single feature of avian anatomy which Dame Nature does not, in one place or another, seize upon and play up to the limit of imagination. Is it feathers, that distinguishing characteristic of the bird? Well, then, the whimsical arbiter of fashions will snatch a handful anywhere, and if she does not pluck it off outright, she will tweak, pull, twist, exaggerate, and distort until we have such creations as the resplendent trains of the Quezal and the Peacock, or the absurd headgear of the Six-wired Bird of Paradise, into which six enormous hatpins have been thrust. Is it color? Some, like the Crow and the Drongo, she plunges into dye-vats filled with steaming logwood; some, like the Titmouse or the Brown Towhee, she covers with dust; some, like Poor-will, she drapes in lichen-hues; and some, like the Wood Duck, she clothes with the rainbow. The Ptarmigan is purest snow, while at some of the Lories this jesting dame has hurled her palette, paint, brush, and all, and has achieved thereby a very tragedy of color. Nor are major organs spared in the craze for variety. Wings may be like sails, or scimitars, or flippers, or else suppressed outright. Beaks are Nature's special plaything, as witness the Avocet, the Toucan, and the Pelican. But for the subject of this sketch has been reserved Nature's special humor as to legs. A creature actually only four inches long as to body—exclusive, that is, of neck and tail—has legs eight or ten inches long. The Stilt's tarsus, or "instep," is alone longer than its body. The Stilt is, therefore, the wader

Taken near Los Banos
Photo by the Author

AN AVIAN TELEGRAPH POLE

Taken near Los Banos *Photo by the Author*

DADDY LONGLEGS

par excellence, and we shall see that it makes out very well with its extraordinary equipment.

I know of nothing which admits a man more surely to the intimate wild of nature than the sight of a company of Black-necked Stilts feeding quietly along the sedge-grown margins of a shallow pond. One feels a delicious sense of privilege, as though he were being permitted to gaze upon some assemblage of antedeluvians. Concealment on the bird's part is impossible, for his plumage is highly advertising. Better, though, if the observer have a blind or a tent or, at least, a covered automobile. Fancy automobiles at a Miocene spectacle! The birds are impossible; you have settled that in advance. This will be a clownish performance with many a mishap of broken stilts or of damaged shins. But as we watch the deft celerity and alert confidence of these gifted waders, incredulity changes to wonder, and wonder to admiration. If the

water is only knee deep (and we always mean "heel" when we say "knee" in bird-lore), then this bird threads the mazes of the budding sedges adroitly, snatching now a larva from a plant stem, and now

Taken near Los Banos *Photo by the Author*

STILT COUNTRY

Taken near Los Banos *Photo by the Author*

A PAIR OF STILTS

Taken in Merced County *Photo by the Author*

BLACK-NECKED STILT APPROACHING NEST

an insect from the surface of the water. The foot is withdrawn backward, with a deftness which scarcely disturbs the water's face, and does not at all roil the oozy bottom. The Stilt will wade about belly-deep, if need be, and stoop to secure dainties off the bottom at that. It is quite at home, also, on dry land, and will snap with unfailing dexterity at the insects which rise bewildered from the ground.

Stilts are a commonplace of migrations in California, arriving from the south about the middle of April. They visit all the wayside ponds and plashes left by the rainy season, or created by the overflow of irrigation. They are usually silent and not too wary at this season, and their frank enjoyment of our wayside fare is one of the gladsome sights of the season. Once, on the beach near Gaviota, I saw a company of Stilts breasting the ocean waves; but it must have been a rare experience for them, as it was a rare sight for us. They are poor swimmers, and their frail pipe-stems were hardly made to withstand the suck of the "hurryback."

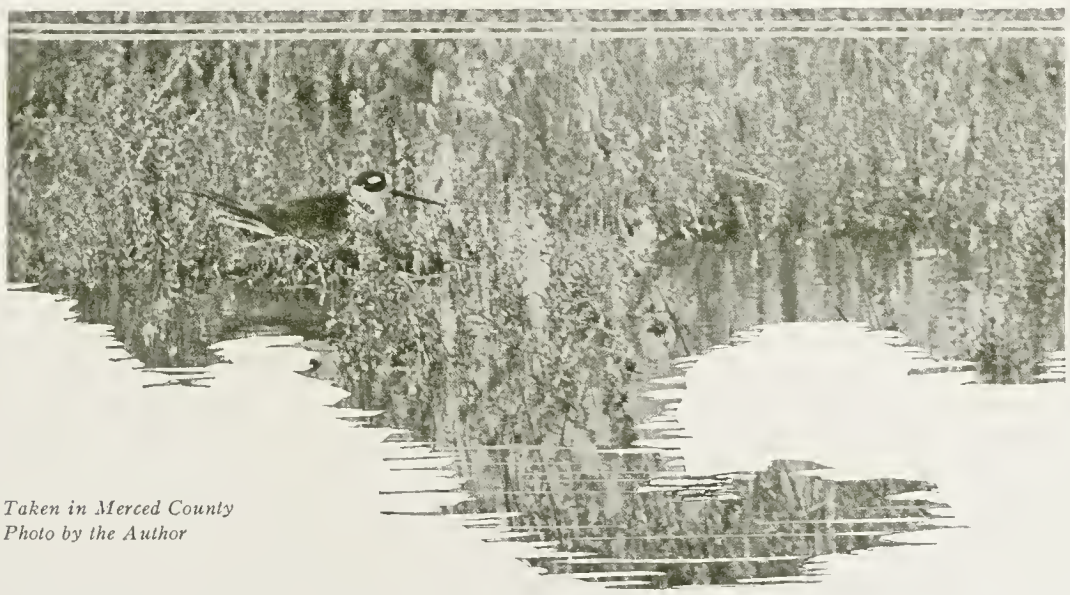
It is to the breeding home, therefore, that we must go to see the Black-necked Stilt at its best. Los Baños will be the first place thought of, although the Stilt is much better distributed throughout the State than the Avocet, and clings to many haunts which its larger fellow has

forsaken. It does not despise limited accommodations, and will tarry in small numbers, if need be, to utilize available forage space. Thus, according to Bradford Torrey, two pairs, or possibly three, raised broods successfully on the Estero in Santa Barbara in the summer of 1912.

Taken in Kern County *Photo by Donald R. Dickey*

AN UNUSUALLY HANDSOME NEST

But on the flooded plains of the San Joaquin Valley you shall see hundreds of them—hundreds at once, if you wish. The invasion of their haunts in May is the signal for wild alarm. Every individual in the local colony sets up a harsh outcry, which consists of a single note, *pep pep*



Taken in Merced County
Photo by the Author

INCUBATING

THE "STILTS" FOLD UP NEARLY LIKE A JACKKNIFE

Taken near Los Banos *Photo by the Author*

THE LONG LEGS MAKE AN EXCELLENT RUDDER

pep, or *krek*, *krek*, *krek*, incessantly repeated. The din is so great and so constant that, if obliged to work in the swamps all day, one's head fairly aches with the clamor before the day's end.

While all are shouting lustily, the birds whose nests are more immediately threatened are doing decoy stunts of several fascinating sorts. The favorite line of effort is the broken-leg act, in which the bird collapses suddenly, as though one of its little pipe-stem legs had snapped in two. The act is performed with such sincerity, even when the bird is standing in only an inch or so of water, that it never ceases to be amusing. Moreover, the trick is repeated diligently every few feet, so that it begins to look as though the bird had taken some fakir vow to prostrate itself every third or fourth step. The Avocet, now that one thinks of it, does the same thing; but it does it awkwardly or, as it were, cautiously, and so unconvincingly. It has manifestly copied from its more agile neighbor.

The second line of effort, most faithfully pursued, is wing-fluttering. In this, again, the Stilt is rather the mistress. It has perfected a trick of putting up one wing at a time and letting the wind towsle it about, as though it were really broken. Of course it also flutters both wings, and

Black-necked Stilt at Nest

From a photograph, copyright 1923, by D. R. Dickey

Taken at Buena Vista Lake

Copyright 1923 by D. R. Dickey

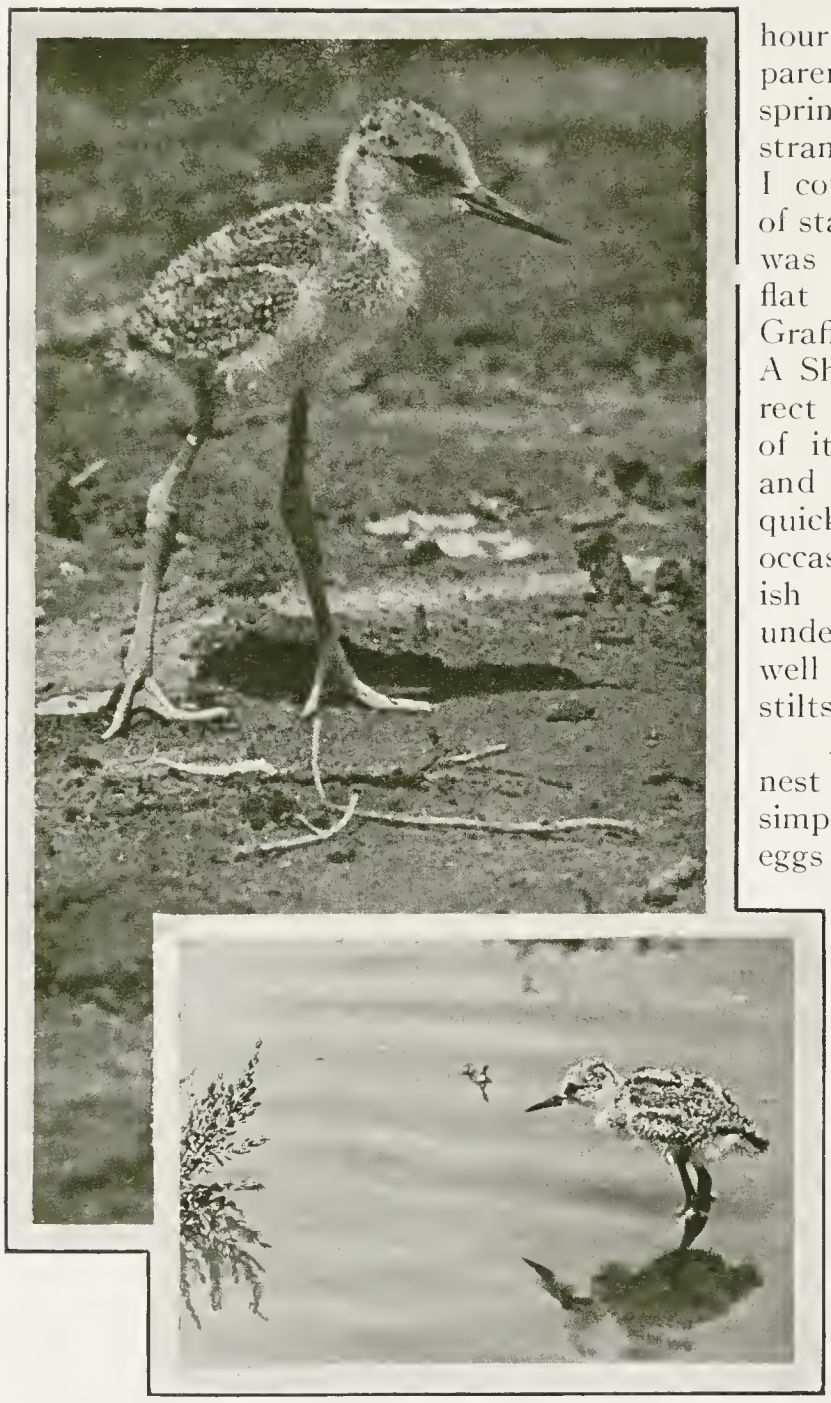
goes through other nondescript flopping and fluttering performances, such as are common to the family of Shore-birds. All is, these operations are carried on at an unseemly distance. The bird is timorous at best, and though demonstrative to a fault, it is the despair of the camerists. Even the wing evolutions, which deserve special notice, are seldom conducted within decent range. In the first extremity of anxiety a Stilt will sometimes charge up and flutter mid-air, with its legs helplessly and ostentatiously dangling, a pathetic proffer of its most useful members. For the rest, it is content to describe incessant noisy circles, or to make spectacular sky-climbs and high dives for the benefit, or despair, of the aliens. The long red legs of the birds make an excellent rudder, and they attempt stunts which, if not impossible to more modest birds, would nevertheless appear very tame in them. The dive, especially, is a startling performance, in which the bird descends like a stricken aeroplane, at an angle of seventy degrees.

Taken near Santa Barbara *Photo by the Author*

THE EXPLORER

The importance of those oft-mentioned members, the stilts of the Stilt, is again emphasized by the appearance of the young bird. While a newly-hatched chick exhibits the familiar pattern of black and tawny which is common to the entire Laro-Limicoline group, its feet and legs have already undergone an extraordinary development. In fact, to the excited fancy the chick appears to be all feet. The infant can make shift to shuffle away from the nest and into cover within the hour, if need be, but he cannot negotiate his stilts

until several hours have elapsed after hatching; and he feels decidedly pale and tottery, like a young colt, until the day after.



Taken in Merced County *Photo by the Author*

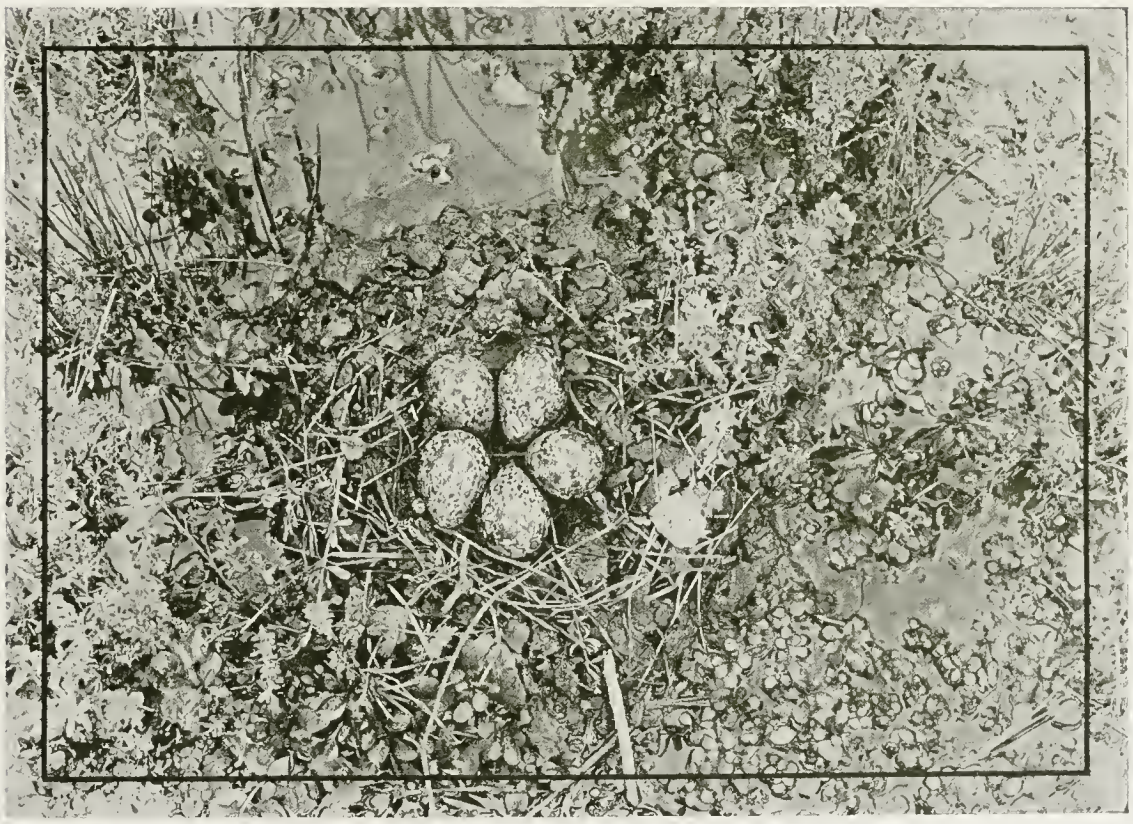
A NEW PAIR OF STILTS

Not even in the supremest hour of need will the anxious parents come near their offspring in the presence of a stranger. In fact, the only way I could secure these portraits of standing birds, where a blind was impracticable, was to lie flat on the ground, with the Graflex, beside a hatching nest. A Shore-bird's fear bears a direct relation to the elevation of its object on the horizon, and a prostrate figure makes quicker friends. On such an occasion one may note the pinkish flush which suffuses the underparts of the male bird, as well as the extra length of his stilts.

As with the Avocet, the nest of the Stilt may be very simple or very elaborate. Many eggs are laid in mere hollows scratched in the dry earth, with a few twigs or bits of cow-dung to mark the site. Others occupy a substantial platform of dried grasses or felted water-plants. It is when the water rises that the birds rise to the occasion, and get busy with nest-building. Sedges, sticks, water-plants with clinging soil, anything movable, is seized and forced under the threatened eggs. Indeed, so

Taken near Los Banos *Photo by the Author*

RECENT ARRIVALS



Taken in Merced County *Photo by the Author*

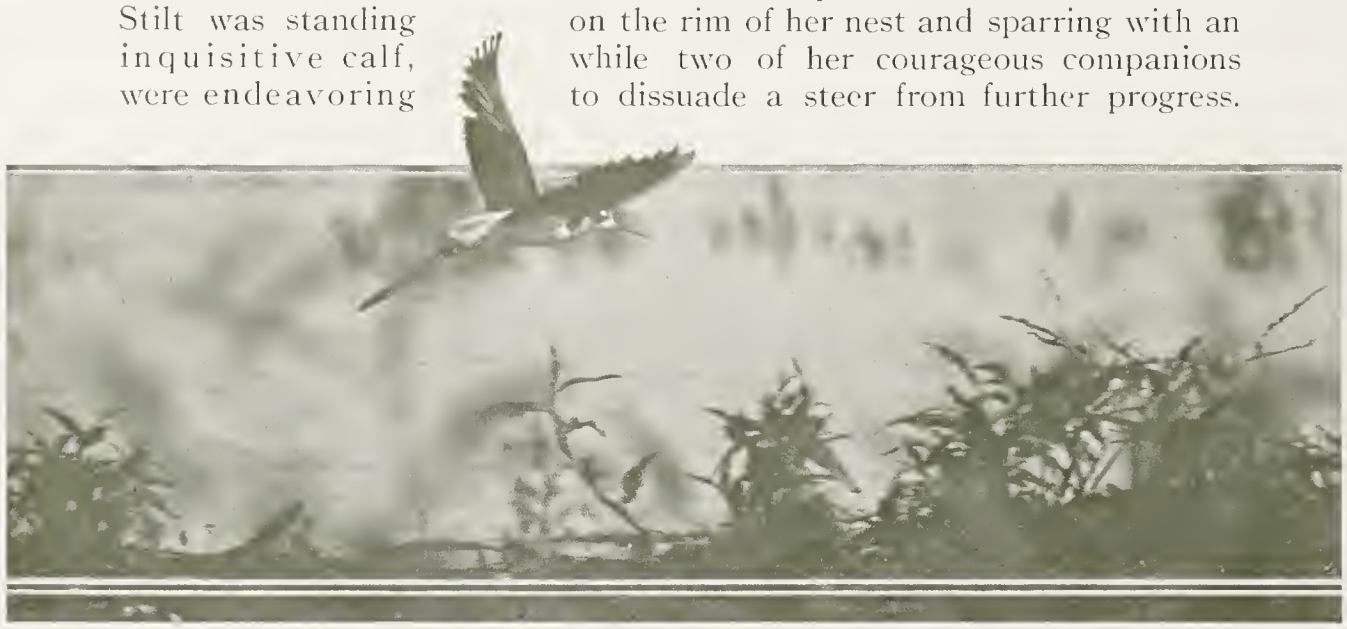
A FIVE-EGG SET

Taken in Merced County *Photo by the Author*

"PALE AND TOTTERY"

apprehensive is the bird of the growing necessity, that as often as she leaves the nest she will seize loose material and fling it over her shoulder for future use. The eggs themselves, protectively colored in bister and black, are mauled about and soiled in the mud; but the day is saved. I have seen a Stilt, painfully conscious no doubt, squatted on a truncated cone of vegetation eight inches in height and as broad across the top,—a veritable Noah's ark of safety.

One other danger the Stilts know right well, and that is the wandering hoof of careless cattle. In a certain field near Los Baños our attention was called to a group which occupied a small grass-covered island a little off the road. Half a dozen cattle stood about in wooden attitudes, while within three feet of one of them crouched a Stilt upon her nest. Beside her stood her valiant mate, shouting lustily and fluttering his wings frantically to keep off the bovines. The cattle did respect the birds' rights, too, for they sheered away from them as they left the island at our approach. Another animated group we saw at a distance in the same pasture. An excited female Stilt was standing on the rim of her nest and sparring with an inquisitive calf, while two of her courageous companions were endeavoring to dissuade a steer from further progress.



Taken in Kern County *Photo by Dickey*

THE SHOW IS OVER

No. 234

Wilson's Snipe

A. O. U. No. 230. **Capella gallinago delicata** (Ord).

Synonyms.—AMERICAN SNIPE. JACK-SNIPE. "ENGLISH" SNIPE. BOGSUCKER.

Description.—*Adult:* Upperparts brownish black, freckled, mottled, barred, and streaked with ochraceous-buff and whitish; crown and back nearly pure black, the former divided by irregular buffy median line; the scapulars and inter-scapulars bordered by whitish or cream-buff, on outer margins only; wings fuscous, the edge including outer web of first primary, white; the greater coverts, secondaries, and sometimes inner primaries narrowly tipped with white; a dark line from eye to bill; throat whitish; sides of head and neck and breast ochraceous-buff, finely spotted and streaked, or indistinctly barred with blackish; belly white, the axillars, sides, and flanks strongly barred,—blackish and white; both tail-coverts and exposed tip of tail strongly ochraceous-buff, or rufous, finely barred with black; tail-feathers black basally, some of the lateral ones white or white-tipped. Bill and feet greenish gray, the former tipped with dusky. Length 254-304.8 (10.00-12.00); wing 127 (5.00); tail 61 (2.40); bill 63.5 (2.50); tarsus 31.8 (1.25). The female averages smaller than the male.

Recognition Marks.—Robin size; general mottled and streaked appearance; long bill used as mud-probe; marsh-skulking habits, and *jack, jack* notes on rising.

Nesting.—*Nest:* A grass-lined hollow in tussock of grass in marsh. *Eggs:* 4, sharply pointed ovate; deep olive-buff, dark olive-buff, or, rarely, isabella color, spotted and blotched, chiefly about larger end, with brownish black, light brownish olive, and sepia (drab, if under shell). Av. size 38.1 x 27.9 (1.50 x 1.10); index 73.3. *Season:* May or June; one brood.

Range of *Capella gallinago.*—Northern Hemisphere.

Range of *C. g. delicata.*—North and Middle America and northern South America. Breeds from northern Alaska, northern Mackenzie, central Keewatin, and northern Ungava, south to southern California, southern Colorado, northern Iowa and New Jersey. Winters regularly from northern California, Arkansas, North Carolina, etc., south to Colombia, British Guiana, and Brazil; sparingly to Washington, Montana, Nova Scotia, etc. Accidental in Hawaii and Great Britain.

Distribution in California.—Common migrant practically throughout the State. Sparingly resident in winter in west-central and southern portions of State. Breeds sparingly in favored sections, but chiefly east of the Sierras. Southernmost recorded breeding station for the species, San Bernardino (Wall—several records).

Authorities.—**Newberry** (*Scolopax wilsonii*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 100; *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 23 (distr. and migr.); *McAtee*, U. S. Dept. Agric., Biol. Surv. Circular no. 79, 1911, pp. 1-9 (food); *Grinnell, Bryant, and Storer*, Game Birds Calif., 1918, p. 350 (desc., occurrence, habits, etc.); *Evermann*, Condor, vol. xxi., 1919, p. 121 (Lassen Co., desc. nest and eggs); *Wall*, Condor, vol. xxi., 1919, p. 207 (San Bernardino; breeding habits).

AS OFTEN as the word "snipe" is mentioned one thinks instantly of this recluse of the inland fens, for he is *the* Snipe of America. In universality of distribution, during migrations at least, he is exceeded by no

other Shore-bird, save, possibly, the Killdeer. Although having almost everything in common with the European Snipe, *Capella gallinago gallinago*, and something with the eastern Woodcock, *Philohela minor*, he is, so far as this country is concerned, *sui generis*. Without question, he is possessed in superabundant measure of that quality called character, which endears him alike to sportsmen, to the bird student, and to the expectant schoolboy prowling knee-deep in the pasture "slough." Jack is rather a disreputable looking fellow, a tatterdemalion, in fact, as he bursts out of his bog with an exultant cry of "*escape, escape*," and flutters his rags in the wind. And as he pursues his devious way through the air, jerking hither and thither in most lawless fashion, the gunner could easily believe him an escaped jail-bird if the stripes of his garments only ran the other way.

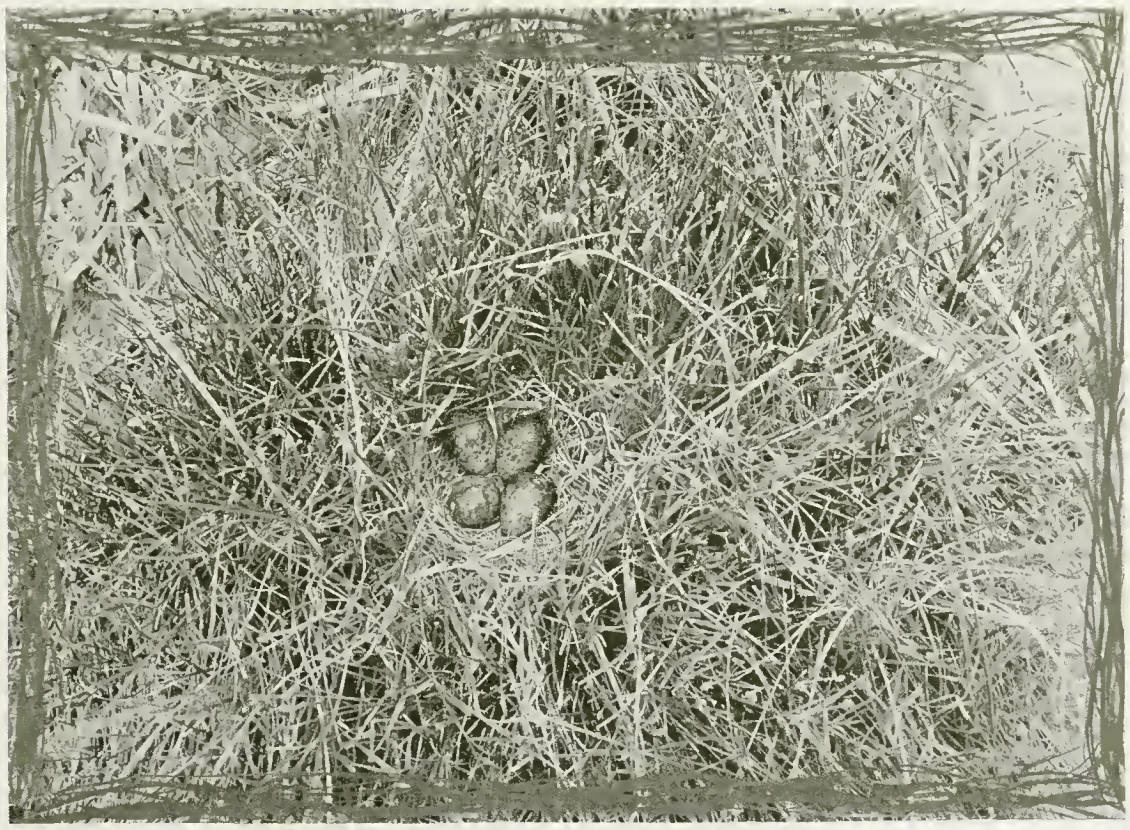
The Wilson Snipe is a bird of the half-wooded swamps as well as of the open marsh, a frequenter of the grassy border stretches, or of the boggy margins of the "spring branch." In such a situation he lies pretty closely by day; but as dusk comes on, he bestirs himself and goes pattering about in the shallow water or over the weedy scum-strewn muck, thrusting his beak down rapidly into the ooze and extracting worms or succulent roots. If danger approaches, by day, the bird's first instinct is to crouch low. If the sky is clear, it is difficult to dislodge him, for the light blinds him in the air, and he knows that his ragged blacks and browns exactly match the criss-crossed vegetation and interlacing shadows of his present surroundings. If, however, the day be overcast and windy, the bird springs up quickly against the wind, shouts "*Jack, Jack*," twice, pursues a bewildering zigzag until out of range, and then flies straight to some other feeding ground, or circles about and enters the old one from another quarter. This zigzag flight, which is the joy of the old gunners and the despair of the young, is really a wonderful exhibition of the self-protecting instinct. For we cannot fairly accuse the Snipe of not knowing his own mind, since, when once out of harm's way, his flight is direct and rapid and he drops into a bog like a shot. The trick must have been deliberately acquired. The cries of the first bird startled are sometimes a signal for all the others in a given swamp to rise and dodge about in the upper air, taking distant counsel whether to return or fly to pastures new. In either case the sport is off for that day, for the aerial caucus is a sign that the birds won't stand much fooling.

Of course the degree of timidity which the birds exhibit in any locality is simply a matter of the amount of persecution to which they have been recently subjected. Sometimes the entrance of a gunner into a field is the signal for the Snipe to flee the country. On the other hand, I once approached, in midwinter, a bird which I knew to be in perfect condition, and which stood quizzically in full survey until I got within five feet of

it, whereupon it calmly *swam* across a little brook rather than bother to fly from the harmless birdman.

All the members of the Snipe family proper, the *Scolopacidæ*, rank high as table birds, but the Wilson Snipe, with the Woodcock, are the most highly prized. Water animalculæ and many kinds of insects appear upon Jack's bill-of-fare, but subterranean worms are the mainstay. These are obtained in large measure by the direct probing of the bird, who is provided with a long beak, having a sensitive and partly flexible tip, controlled by a special set of muscles. In addition to this, however, it appears to make use of an ingenious device. While walking through a marsh, patches of mud are often found sprinkled with small round holes set close together. These are the work of snipe, and are called "borings," being made by the bird's thrusting its long bill into the mud as far as the forehead. As it walks over and around the holes, insects and worms crawl out of them and are captured. Much the same thing may be done in a garden by boring a quantity of holes with a small stick, and then rapping the ground with it smartly.

It is, however, neither as a viand nor a gourmand that some of us



Taken in Inyo County *Photo by the Author*

NEST AND EGGS OF WILSON SNIPE

Taken near Santa Barbara *Photo by the Author*

"JACK" AS THE GUNNER SEES HIM

prefer to think of the Jack-snipe, but rather as a member of society. For Jack is an ardent lover, a devoted husband, and a resourceful father; and Mrs. Jack, no less, is possessed of all the domestic virtues. Let me take the reader to Snipeville. Shall it be an open, sunny swamp in Owens Valley? The date is the 21st of May. The air is full of hooting males (say, three or four), a challenge for proper birdmen to heave to for the night. As we cast about for a possible camping site, my attention is arrested by a solicitous bird who is "yelping" from the ground. The notes are dissyllables, *pe chep' pe chep' pe chep'*, endlessly iterative, and uttered earnestly for minutes at a time. I can see the bird's mandibles playing rhythmically, and he sways his head slowly from side to side as he pipes. After two long rounds he takes to a leisure wing and so joins the merry company of cavorting hooters. In the language of Tam o' the Scoots, Junior: "Hoot, mon, but it was an awesome sicht to see the auld bird ootlined against the jaggedest Sierras, the while he winnowed the air with his pinions and quavered for the delectation of his lady love." She, poor dear, was enjoying a little refection of worms while her lord wailed and hurtled aloft. I saw her eating hard by, while the male bird quitted the earth. Food must have been very abundant in this particular bog, for though she prodded and gobbled most vigorously, the lady did not require to leave the space of a square foot in fifteen minutes' prodding.

But the hooters themselves demand early attention. Courtship is at its height, and these aviating Romeos are staging a flying circus. Each,

independent of his fellows, but in conscious rivalry with them, describes great free circles hundreds of feet in extent, and when a sufficient height has been attained, starts downward in a long glissade. Presently a weird pulsating sound emerges, gains power and focus, till the ear-drums feel the physical strain, and trails off again into silence: *hoo hoo* HOO HOO HOO *HOO HOO* HOO HOO *hoo hoo*. The effect produced by several contestants, each careening and charging about the open sky, is indescribably thrilling and spookish. Dr. Brewster thinks the sound can be heard a mile away; and I am willing to testify that it is the most eerie and penetrating sound which the American swamps offer.

Now, how is this uncanny sound produced? After closely studying many of these "song" flights under 8-power binoculars, I have come to the conclusion that the body of the sound is produced by the impact of air upon the sharp lateral feathers of the tail, held stiffly, while the pulsations of sound are produced by the wings. At least it is certain that the pulsations of sound are synchronous with the wing-beats. Moreover, the sound is never produced save when and as the tail is spread to the utmost, so that the two outer pairs of rectrices, which are much the shortest, are thrown forward at right angles to the axis of the body. The sound begins gradually, as while the tail is expanding, and closes with a smooth diminuendo as the tail is closing, and while the wings are sailing. Of course the effort is confined to a downward flight, and that at a rather moderate angle. When concluding a "song" cycle, the bird dives sharply to the ground with wings uplifted and motionless, and lights with an easy volplane. The hooting operation itself varies interminably in length from one to five seconds, at the pleasure of the performer. The pulsations, or wing beats, will run three or four to the second—probably nearer the latter figure.

There are, to be sure, "things doing" in the swamps with such carryings on overhead. But if all the oölogists in California were to turn to and hunt Jack-snipes' nests, their number would not be sensibly diminished through the years. Be the air above never so vocal, the finding of a nest is rarely more than a fortunate accident. The author's turn came one day in a foul swamp, much frequented by horses and cattle. I was wallowing through ooze of indescribable richness, and making fretful complaint of the fumes of marsh gas which welled up from the depths, when—*Psst!* A feathered bomb fairly exploded in my face as I approached a green tussock some two feet in diameter. This explosion ruse had doubtless availed to divert sundry "cow critters" on previous occasions of imminence, and had sent some of them off, belike, snorting and blowing; but the sordid human leaped forward, instead, to behold an authentic set of Jack-snipe's eggs, four in number, reposing on a carefully prepared bed

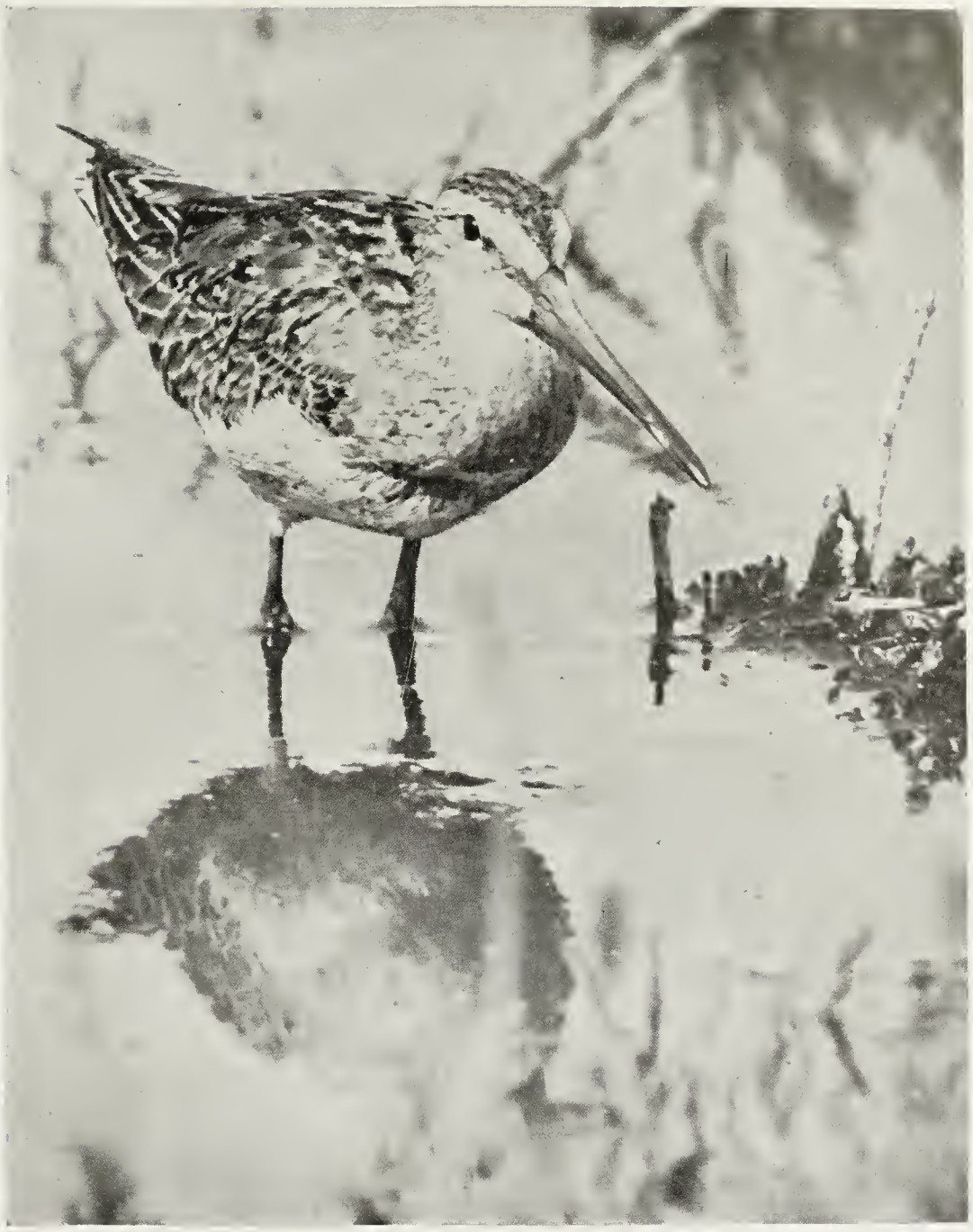
of twisted sedges. Seeing that I was not to be deflected by violence, the mistress of the nest flung herself upon a wet island hard by and indulged in a vigorous decoy pantomime. The appeal was not to hunger this time, nor was there any pretense of broken bones. In her extremity the bird offered herself—upon the altar of desire. The yonigic motif of the pose was unmistakable, and the elevated tail, spread fan-wise, exposed rufous tips of unsuspected brilliance, and formed a setting really seductive. But again the bird had guessed wrong. The birdman proved a veritable St. Jerome, and the lady, scorned, left in highest dudgeon.

Returning a little later, with a view to securing a snapshot of the rising bird, she flushed less noisily, while I was still twenty feet away. Another attempt put her off at thirty feet; and on a still later occasion she sneaked away, instead, and flushed at a considerable distance.

So long as intruders are near his swamp, Jack himself keeps a sharp lookout; and he does not hesitate to appropriate for the purpose any elevated station,—fence-post, hay-rick, or tree-top. On such occasions, when the bird is settled on a post, regarding you with sober down-turned beak and watchful eye, the effect is irresistibly comical. Still more diverting and very much rarer is the sight of two or three youngsters, with half-grown beaks, trooping after a mother who is all solicitude or brooding tenderness. And the pleasure which the youngsters evince when it comes their turn to thrust long skewers into the mud is diverting in the extreme. Theirs is a joy akin to the making of mud pies, and what child is there who would not just love to make mud pies for a living!

The history of the Jack-snipe as a breeding bird of California has been a succession of surprises. We all knew in a vague way that the birds bred in the swamps of the northeastern plateau country about Tahoe, and in the Modoc-Lassen region. But when Joseph Mailliard reported[1] the taking by A. van Rossem of a set of four eggs near Gorman, in extreme northwestern *Los Angeles County*, we gasped with surprise. The date was April 24, 1914, and the altitude 3800, approximately that of Tahoe. This was a hundred miles south of any previous breeding record for the species, and the record itself proves to be, most amusingly, the first specific *published* record for this State. Other records from northern localities promptly followed. I have myself found Jack-snipe breeding at Goose Lake, in Modoc County, and at Bishop and Lone Pine, in the Owens Valley. But Judge Edward Wall capped the climax by publishing in 1919[1] an account of the Wilson Snipe as a long-established breeding bird near San Bernardino. Judge Wall's experience reaches back to 1887; and, specifically, he found a nest containing three eggs in 1917 within two miles of the city of San Bernardino, and in 1918 a nest con-

[1] The Condor, Vol. XVI., Nov. 1914, p. 261. [2] The Condor, Vol. XXI., Sept. 1919, pp. 207-209.



Honest John Dowitcher

From a photograph by the Author

Taken in Monterey County

taining young and an egg. In a State which is notable for distributional exceptions and faunistic anomalies, few records equal this one in interest. Think of it! A bird which breeds habitually to the limit of trees in British America, and which barely deigns to display itself in summer in favored localities in the *northern tier* of eastern states, nevertheless tarries in California in the heart of the orange belt, and miles south of the burning wastes of the Mojave Desert! Who shall deny that California is an empire, a microcosm, a world within herself!

Whether or no the Jack-snipe is actually on the increase in California, we cannot say, yet. The observance of the excellent laws now on the statute books is calculated to restore the species to something like its former status. But until lately the Jack-snipe has been the victim of terrific and incessant persecutions, especially in the "old" South. Bearing in mind that the Jack-snipe is in itself one of the most difficult birds to shoot, the following example of human skill—and rapacity—will show how unequal has become the contest between bird and brute. The case is cited by Wells W. Cooke:[1] "How they (the Wilson Snipe) abounded formerly and how they were slaughtered by southern gunners is forcibly shown by the record of a single hunter in Louisiana, who, during the twenty years from 1867 to 1887 killed 69,087 birds, an average of 3,500 snipe a winter. In 1870 about 100 snipe were killed by this man for each day he hunted. The maximum was reached in 1875, with 150 birds a day; this fell to 100 in 1880, and to 80 in 1887. Individual days far exceeded these average figures. The highest score for seven consecutive shooting days was reached in 1877, when, on December 8th, 270 snipe were killed; December 10th, 255; December 11th, 366; December 13th, 271; December 15th, 286; December 17th, 233; and December 19th, 262—an average of 278 a day and a total of 1,943 birds in seven days' shooting. The bag on December 11th—366 snipe—is supposed to be the world's record for slaughter by one man in one day." There are doubtfully 366 Wilson Snipe *resident* in California at the present time and without question there are not as many breeding birds within the limits of the United States as this one Caligula has killed.

No. 235

Long-billed Dowitcher

A. O. U. No. 232. **Limnodromus griseus scolopaceus** (Say).

Synonyms.—Western Dowitcher. Western Red-breasted Snipe. Red-bellied Snipe. Brown Snipe (spring). Gray Snipe (fall).

[1] "Our Shore-birds and their Future" by Wells W. Cooke, Yearbook Dept. of Agriculture for 1914, p. 279.

The Long-billed Dowitcher

Description.—*Adult in summer:* Upperparts black, finely mottled and streaked with pale cinnamon-rufous, and with some white; rump and upper tail-coverts white, finely and heavily marked with broadly crescentic, blackish spots, and sometimes tinged with ochraceous; tail barred with black and white, or the central feathers with black and ochraceous; lesser wing-coverts light grayish brown; primaries dusky; the greater wing-coverts and secondaries varied by white margining, shaft-marks and tips; a chain of dark specks from bill to eye; belly whitish; remaining underparts rich cinnamon, finely but not heavily speckled on sides of head and neck, and across breast with blackish; thickly barred with the same on sides and flanks; axillars and lining of wings white, striped and barred, or with V-shaped markings of dusky; bill and legs greenish black. *Adult in winter:* Cinnamon-color and ochraceous entirely wanting; upperparts, neck all around, and breast, broadly, grayish brown, well blended, but the feathers with darker centers or shaft-marks; belly more broadly white; black-and-white barring of tail-coverts as before, but dusky bars of axillars, sides, etc., duller—grayish. Length 279.4-317.5 (11.00-12.50); wing 145.3 (5.72); tail 55.9 (2.20); bill 69.1 (2.72); tarsus 38.9 (1.53). Females average larger than males.

Recognition Marks.—Robin size; pale cinnamon predominant above and rich cinnamon below in summer; fine mottling of back in either plumage; long bill; mud-probing habits; closely gregarious and non-secretive, as contrasted with *Capella gallinago.* The lengthened bill of this species is sufficient to distinguish it from *Canutus canutus*, with which it offers a rough parallelism in color changes.

Nesting.—Does not breed in California. *Nest:* A hollow in grassy hummock or sphagnum, scantily lined, or not, with bits of grass. *Eggs:* 4; pointed ovate; olive-buff or deep olive-buff, well spotted with brownish black, and with under-shell markings of deep brownish drab. Av. size 41.9 x 27.9 (1.65 x 1.10). *Season:* June; one brood.

Range of *Limnodromus griseus.*—North and South America. Breeds on the mainland in the middle high latitudes south to Yukon mouth; and winters from the southern borders of the United States south to Brazil.

Range of *L. g. scolopaceus.*—Western North America, and, perhaps, northeastern Siberia. Breeds from northwestern Mackenzie southwest to the Yukon delta. Winters from the Gulf States south to South America.

Authorities.—**Gambel** (*Macrorhamphus griseus*), Jour. Acad. Nat. Sci. Phila., ser. 2, 1, 1849, p. 224 (along the coast); *Howe*, Auk, vol. xviii., 1901, p. 161, map (migr., meas., plumage, etc.); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 8 (Santa Barbara; migr. dates).

THE DOWITCHER is a sort of unsophisticated country cousin of the Wilson Snipe. No doubt his flesh is just as good to eat, also, but his manners are so unwary that his pursuit has, fortunately, never been rated good sport. Dowitchers, indeed, are such friendly, sociable chaps that I, for one, hope their names will never be removed from the protected list. In lieu of a shocking record of slaughter, such as we had to contemplate in the account preceding, I respectfully submit herewith a rather liberal gallery of portraits, record shots some of them, which in every instance left the birds unharmed and fully reassured.

Viewed simply as sport, the author can recommend the photographic

pursuit of the Shore-birds as among the most thrilling of human pastimes. Given a "reflecting" camera and a lofty disregard for personal appearance, one may have no end of fun—unforeseen difficulties, breathless suspense, sudden disappointments, increasing facility of approach, stupendous moments of opportunity, brilliant achievements—these are on the daily program of the bird photographer. And the trophies secured! They cause no one a pang, not even the bird; and are they not a joy forever?

My most regal hours with the Shore-birds have been spent on the upper reaches of the tidal lagoons at Sandyland, near Santa Barbara.

Taken near Santa Barbara *Photo by the Author*

THE NOONING

If the tide is out, the flats are fairly a-crawl and a-clatter with Shore-birds of six or seven varieties,—Western Sandpipers, Least Sandpipers, Baird's perhaps, Semipalmated Plovers, Killdeers (worse luck!), Wilson Phalaropes, a Willet maybe, and most certainly a scattering company of Long-billed Dowitchers. To approach these birds in the open one must move always with extreme deliberation and get as low upon the horizon as possible. I go to it barefoot and hump over the camera until I look like some amiable tortoise. Plowing along knee-deep in muck in such fashion involves some little dexterity, and it is very tiring. The exertion is not unlike that required by a slack-wire performer, for the foot penetrates the black depths in such irregular and unpredictable fashion, that one must constantly strain to maintain a reasonable balance. Now and then one encounters a soft seam, the filling of an ancient mud-

crack, and goes down so irresistibly that dignity is quite forgotten, and the outraged birds flee as from a scare-crow with suddenly brandished arms. Quietness, too, is *de rigueur*, and the author quite prides himself, now, upon being able to withdraw an Ethiopian foot from the depths, all silently, instead of with a sound like elephantine osculation.

Meanwhile, the sights visible on the plates are all of "Rewards and Fairies." Tiny "Peeps" are pattering over the glistening surface of the mud and gladdening the ear with Puckish chatterings. Their little bodies and roguish glances, displayed at minimum range, challenge another shot,

(Upper) Taken in Monterey County
(Lower) Taken near Santa Barbara
Photos by the Author

The Lowly Pleiades

Long-billed Dowitchers at Sandyland

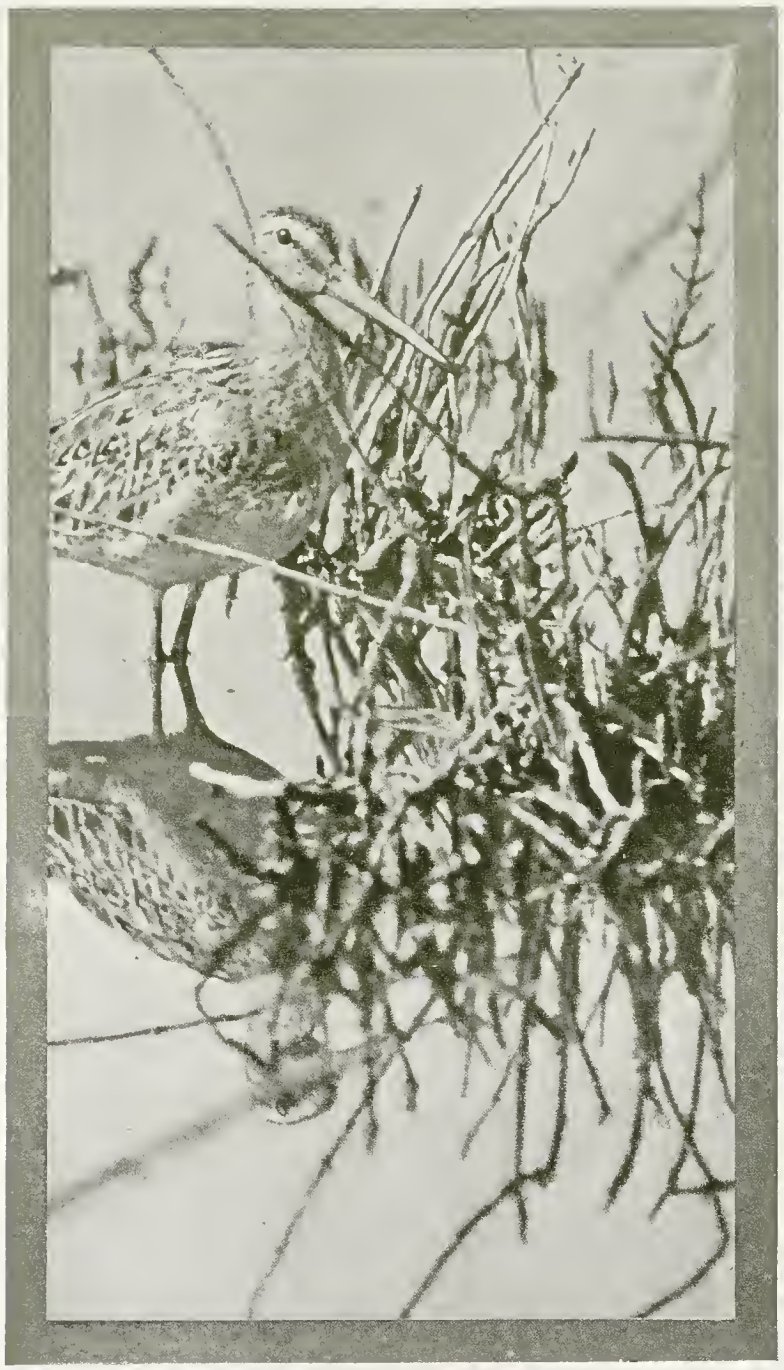
From a print by Fedora E. D. Brown

Negative and cutout by the Author

Taken near Santa Barbara AT HIGH TIDE *Photo by the Author*
LONG-BILLED DOWITCHERS ON PROTECTED WATER

even though the cabinets at home be already groaning with Peep negatives. Killdeers in the offing are shouting their imprecations and warnings, for nothing so delights the Killdeer's heart as to stampede the small fry in the face of pretended danger, and so be looked up to as a leader and a savior. But among those who wait and heed him not, the gentle Dowitcher is preëminent. He is very much occupied just now in jabbing holes in the soft muck. I had the curiosity one day to count the number of jabs made per minute: one bird delivered seventy-five, and another a hundred. This count included the minor thrusting motions made in each hole, as well as new prospects started. But the minute, as reckoned, was elapsed time, and included, besides the hundred thrusts, all moments spent in devouring prey and in pausing to take new bearings. Another bird drilled thirty new holes each minute.

When more closely pressed, the Dowitcher pauses and gravely considers, with motionless beak. He remarks, *Quit up* to a fellow, and scuttles away a foot or so, pausing again, or resuming busily. If driven to flight, the Dowitchers close ranks instantly and move off in unison like Sandpipers, now wheeling sharply and flashing white underparts, now tacking so that their brown backs are scarcely visible against the dun wastes of salicornia. While never a noisy bird, there are always a few in a flock to make mellow comment or protest, *clip r teeoo* or *cleeu koo, koo,* unexpectedly Tattler-like.



Taken in Monterey County *Photo by the Author*

THE AMBUSCADE

When the tide is high and mucking is over, our Dowitcher friends stand knee-deep in the warm shallows, tuck heads under wings and indulge a dreamless sleep, the envy of all neurasthenic Tattlers and insomniac Killdeers.

Once, at Elkhorn, on Oct. 11, 1913, just before the opening of the duck season had set the marshes aroar, I came upon a solitary Dowitcher feeding in a flooded meadow. Long-billed Dowitchers were an ancient target by that time, but this demure Barkis proved so unco willin' that I burnt up ten plates on him, always at a diminishing distance, and the last two or three at minimum range. Once or twice the bird flitted a little distance, but oftener it fed as it retreated, and it allowed itself to be "cornered" repeatedly rather than be at the trouble of flying. Some of the poses were dreams! The bird could not have been more obliging if he had let me clamp the back of his head in the old-fashioned photographer's tongs. But what is the use of printed exclamations? There stands the bird, a conscious model, perfect in every detail, and so life-like that the feeble pencil of the note-taker is abashed. Words are mere padding for pictures nowadays!

Long-billed Dowitchers are well distributed through California, especially coastwise, during the migrations. A few linger to winter both in southern California and in the central valley. A straggler may now and then be seen in summer time, but there is no suspicion that they breed with us.

The typical breeding range is Alaska, and Nelson found them mating at the mouth of the Yukon about June 1st. "Two or three males start in pursuit of a female and away they go twisting and turning, here and there, over marsh and stream, with marvelous swiftness and dexterity. At short distances a male checks his flight for a moment to utter a strident *peét u weét; wee-too, wée-too;* then on he goes full tilt again. After they are mated, or when a solitary male pays his devotions, they rise 15 or 20 yards from the ground, where, hovering upon quivering wings, the birds pour forth a lisping but energetic and frequent musical song, which can be very imperfectly expressed by the syllables *peét-peet; pée-ter-wee-too; wée-too; pée-ter-wée-too; pée-ter-wée-too; wée-too; wee-too.* This is the complete song, but frequently only fragments are sung, as when the bird is in pursuit of the female."[1]

The eggs, four in number, and closely resembling those of the Wilson Snipe, are placed in a shallow depression formed by the bird's body in the soft moss which covers the ground in that region.

[1] E. W. Nelson: "Rep. of Natl. Hist. Colls. made in Alaska," 1881, p. 101.

Taken near Santa Barbara *Photo by the Author*

A PROBING INQUIRY

No. 236

Knot

A. O. U. No. 234. **Canutus canutus** (Linnæus).

Synonyms.—Robin Snipe. Gray Snipe.;

Description.—*Adult in summer:* Upperparts light gray, streaked centrally with black (narrowly on crown and nape, broadly on back and scapulars), and varied irregularly with some ochraceous buff; primary coverts and primaries blackish, the latter with white shafts; upper tail-coverts with subterminal U- or V-shaped markings of dusky; tail uniform grayish brown; underparts in general pale cinnamon-rufous; cheeks and superciliary region washed with same, and dusky-streaked; paler or white on belly; crissum, under tail-coverts, thighs, lining of wings, and sides white,—the last two and sides of breast more or less dusky-barred. Bill and feet greenish black. *Adult in winter:* Above plain ashy gray; upper tail-coverts and tail as before; underparts white; the sides of neck, fore-neck, and chest with faint dusky streaks, or irregular bars, and the sides similarly barred. *Immature:* Above, ashy gray, mottled with dusky on crown; with whitish edging and narrow submarginal dusky on feathers of back and scapular region; the fore-breast flecked or streaked, but not barred, with dusky; otherwise much as in winter plumage adult. Length 254-279.4 (10.00-11.00); wing 165.1 (6.50); tail 58.7 (2.31); bill 34 (1.34); tarsus 31.2 (1.23).

Recognition Marks.—Robin size; called "Robin Snipe" from the cinnamon-rufous of breast (in summer); the largest of the *Tringæ;* found coastwise.

Nesting.—In highest Arctic latitudes. *Eggs* (As described by Mr. Ludlow Griscom from set taken by Elmer Ekblaw, of the American Museum of Natural History Expedition to Crocker Land): 4; white as to ground, strongly or weakly washed with olive-green, splotched and spotted thickly with olive-brown, chiefly at larger end. Av. size 46.6 x 30.4 (1.83 x 1.20).

General Range.—Circumpolar; in migrations south, chiefly along the sea coasts to extremities of the continents, New Zealand, Australia, etc. Not commonly found in the interior of North America nor along the Pacific Coast.

Occurrence in California.—Of irregular occurrence during migrations, coastwise. Sporadically common.

Authorities.—**Townsend** (*Tringa canutus*), Proc. U. S. Nat. Mus., vol. x., 1887, p. 198 (Humboldt Bay); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 8 (Santa Barbara; migr. dates); *Grinnell, Bryant, and Storer*, Game Birds Calif., 1918, p. 363 (desc. occurrence, habits, etc.).

"WHEN King Canute, or Knut, had dined on a dish of strange coast-faring birds, he was gracious enough to express to his blushing chef the royal appreciation of the flavor. Whereupon the eager courtiers dubbed the waders Knuts, or Knots, and so they have come down to us—at least so Pennant says; and Linnæus, not over-serious (he was a busy man with all of Adam's task to finish) accepted the tradition in '*Tringa canutus*.' It is certainly fitting that these birds of the farthest north should bear the name of some hardy Norseman.

"Knots have swept down the roaring coasts for centuries, but the mystery was, Where do they come from? Sir So-and-so was charged to bring back with him from the algid North, along with sundry information about the tides, and temperatures, and short cuts to China, a set of Knot's eggs; but he came back empty-handed. Grizzled sea-captains said, 'Lo, here! lo, there they breed'; but the eggs were not forthcoming. Finally, it was left for our own Lieutenant Greely to bring back the first authentic specimen, one taken near Fort Conger, lat. 81° 44′, North, together with the parent bird. Verily, if we were Knots, even baby Knots, we might stand some show of reaching the North Pole" (The Birds of Ohio).

The Robin Snipes are found chiefly coastwise, and they are, or were, very much more common on the Atlantic seaboard than along our shores. But there is a favored spot in Alameda County, a part of the San Francisco Bay shore, which appears to have been a major station for these birds from time immemorial. Here they have been seen by the score, perhaps hundreds, during both the spring and fall migrations; whereas, save for Fannin's brief comment,[1] "Abundant during migrations," our records of this bird's occurrence on the Pacific Coast seem to be most meager, and those concerned with chance individuals or very small companies. There are half a dozen records for the coast of California; and I have noted the bird twice at Santa Barbara: once on August 29th, 1911, two immature birds; and on May 1st, 1913, a single individual in winter (or immature) plumage.

Knots move about, now singly, or in small flocks, and may be found on the mud flats as well as on the sandy beaches. The plain dark coloration of an adult does not attract attention at a distance, but it is often associated in feeding and in flight with more brightly colored birds, notably the Turnstone (*Arenaria interpres*). It is, moreover, one of the least suspicious of the larger Shore-birds, and decoys readily to any whistle of its genus, even though the gunner be standing in plain sight. The bird feeds chiefly upon aquatic insects, crustaceans, and small bivalves. These it secures chiefly from the wake of the receding wave, but it swims also with ease, and does not fear a little buffeting on the part of the racing "hurry-back." At high tide it cheerfully retires to the marshes and probes for its food in the more open places.

The record of human dealings with this gentle, trustful Northlander is an altogether sad one. According to Mr. George H. Mackey, our highest authority on the species, Knots used to rise from the bay shores of Massachusetts "in clouds." Twenty-five thousand was a sober estimate of the number to be seen at a given station in one season in the middle of

[1] "Catalogue of British Columbia Birds," Victoria, 1904, p. 21.

the last century. In those days powder and shot were deemed too precious to waste upon them (they were worth ten cents a dozen in the Boston market); so the more economical system of "fire lighting" was adopted. Dazzled by the light of a lantern or torch held low, the birds were seized by hand by an assistant who crept about on hands and knees, and they were bitten through the neck to insure a quiet death, gathered into sacks or barrels, and shipped to market. Writing in 1893, Mr. Mackey had to say:[1] "For twelve years past the number of Knots in the vicinity of Tuckernuck Island (a favorite resort of early days) has not averaged more than fifty birds." Is it any marvel, then, that our Federal authorities have placed this bird upon the protected list and are striving to nurse the embers of a vanishing race back into life?

No. 237

Sharp-tailed Sandpiper

A. O. U. No. 238. **Pisobia acuminata** (Horsfield).

Description.—*Adults* (in autumn): Above black, much restrained by ochraceous edgings; pileum tawny in excess of black; cervical region, shading on sides of neck, warm buff; edgings of tertials ochraceous buff; the lengthened scapulars sharply edged with white on outer web; tail blackish, lightly margined with ochraceous, wedge-shaped, graduated, each feather tapering sharply; underparts white, with warm buffy suffusion on throat and across breast; this area lightly speckled with obscure dusky, more heavily on sides of neck and breast; sides of head white, speckled with dusky; a broad superciliary white; flanks narrowly streaked with dusky. "Bill changing from greenish yellow basally to blackish toward tip; feet greenish yellow." Adults in breeding plumage are said to be more rufescent, with jugulum heavily spotted or barred with dusky. Length of adult male: 203.2-228.6 (8.00-9.00); wing 132 (5.20); tail 58 (2.28); bill 26 (1.02). Females average smaller.

Recognition Marks.—Towhee size; the strength of the buffy brown element above and the strong buffy suffusion of breast most distinctive; comparative *absence* of streaks on chest in winter plumage distinguishes from *P. maculata*.

Nesting.—Scarcely known; probably much as in next species. Does not breed in California.

General Range.—Breeds in northeastern Siberia; south in winter, chiefly along eastern Pacific shores and islands, to Australia and New Zealand; also in autumn migrations, western Alaska, and occasionally south to British Columbia. Casual in Washington, California, the Hawaiian Islands, and England.

Occurrence in California.—One record,—San Diego, Sept. 16, 1921, by A. W. Anthony.

Authorities.—**Anthony** (*Pisobia aurita*), Auk, vol. xxxix., 1922, p. 106 (San Diego, Sept. 16, 1921, 1 spec.); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, p. 35 (distr. and migr.).

[1] The 'Auk," Vol. X., Jan. 1893, p. 28.

WE HAVE ALL chuckled speculatively over the linguistic exercises laid out for the Tchuktchis, or the Tschuktschis, or, more obviously, the Chuckcheese; but apart from the difficulty of stuttering "I love you" in Tchuktchese, we'll warrant that life goes on right merrily where the Arctic Circle cuts through Sandpiperland, alias the Tchuktchi Peninsula. Six weeks suffice for the rearing of a family in a land which, in summer, enjoys the benefit of an unsetting sun; and so, for the rest of the year, these happy-hearted children of the North are free to wander—over a hundred degrees of longitude, it is said. Although born Asiatics, the Sharp-tailed Sandpipers, following the natural trend of the land-masses, sweep the coasts of western Alaska in the autumnal migrations, preparing, no doubt, to "hop off" somewhere in the Aleutian Islands. A few birds, novices, for they are always young-of-the-year, hug the American shore instead and straggle down the northwestern coast. Four birds were taken (not preserved) by J. M. Edson at Bellingham, Washington, in September, 1892. And now Mr. Anthony, on lookout at that stronghold of opportunity, San Diego, has clinched the United States record by a specimen, a young male, secured on the 16th of September, 1921. Mr. Anthony on the same day glimpsed another flock of eight or ten birds which he surmised were of this species.

No. 238

Pectoral Sandpiper

A. O. U. No. 239. **Pisobia maculata** (Vieillot).

Synonyms.—Grass Snipe. Krieker. Jack Snipe.

Description.—*Adult:* Above, ground-color blackish, everywhere heavily margined, and thus finely streaked, with ochraceous-buff, ochraceous, or rusty, and with some grayish or whitish edging on the larger feathers; darker on crown, where streaked with rusty only; wing-quills dusky, the first primary only with shaft white above; rump and upper tail-coverts black, delicately tipped with rusty; tail sharply pointed, the central feathers longest,—blackish centrally, brownish gray laterally, with ochraceous or white edging; below, sides of head and neck, fore-neck and breast finely, sharply, and heavily streaked with dusky on a dull white or buffy ground; throat and remaining underparts white. Bill and feet greenish dusky. *Coloring in winter* perhaps more blended. There seems to be no constant difference between summer and winter plumages,—conflicting authorities to the contrary. *Immature:* A little brighter-colored above, with sharper markings and more rusty, and with considerable white edging on larger feathers of back; the breast more deeply buffy, and the streaks, if possible, more numerous. Length of adult males 203.2-241.3 (8.00-9.50); wing 137.2 (5.40); tail 67.8 (2.67); bill 29.7 (1.17); tarsus 27.8 (1.10). Females are much smaller.

Recognition Marks.—Towhee size, but appearing larger; fine streaking of fore-neck and breast on heavy ground, contrasting with pure white of throat and belly,

distinctive for size. Requires careful distinction from succeeding species, which is one-third smaller.

Nesting.—Does not breed in California. *Nest:* A depression in the ground or tundra. *Eggs:* 4; pale olive-buff to deep olive-buff, heavily marked, spotted, and blotched with brownish black and sepia, the darker markings often heavily shadowed by sepia or light brownish olive. Av. size 38.1 x 27.2 (1.50 x 1.07); index 71.3. *Season:* June; one brood.

General Range.—Northeastern Siberia, the whole of North America and the West Indies and the greater part of South America. Breeds in the Arctic regions. Of frequent occurrence in Europe.

Occurrence in California.—Not common spring and fall migrant coastwise.

Authorities.—Cooper (*Actodromas maculata*), Proc. Calif. Acad. Sci., vol. iv., 1868, p. 8 (San Francisco Bay); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 8 (Santa Barbara; migr. dates).

Taken in Monterey County *Photo by the Author*

A LITTLE DOUBTFUL

THE AUTHORITIES used to tell us that the Pectoral Sandpiper was "rare" or "casual" anywhere along the Pacific Coast. Well, perhaps it was, or perhaps it was merely overlooked. Recent records, at least, have tended to destroy the earlier traditions of a bird so rare that the layman might never hope to see it. The third record for the State of California was made by Bradford Torrey[1] who saw birds at Santa Barbara from September 17 to 23, 1909. Mr. J. Hooper Bowles' dates for 1910 at the same station were April 14th and September 8th; and for 1911 (with Mr. A. B. Howell), Aug. 18 to Sept. 20. The species was not detected in 1912, but I found it again on Aug. 20, 1913, in the Santa Barbara Estero; and again on the 11th of October at Elkhorn, in Monterey County, on the grounds of the Empire Gun Club.

[1] "Condor," Vol. XII., Jan. 1910, pp. 44, 45.

At the last-named station a flock of six Pectorals, feeding in the flooded salicornia beds, afforded a very pleasing sight. There would have been handsome photographic records, too, if it had not been for the wicked lies the Killdeers told. As it was, I played tag with these *Tringæ* for the best part of two hours and found them far wilder at the end of the "sitting" than at the beginning. The Pectorals often consorted with the Leasts (*Pisobia minutilla*), and under the spur of the Killdeer bulletins (published every five minutes by a feathered Ananias whose neck I should like to have wrung), these usually trusting little fowls were soon wrought up to a state of nervous tension exceeding the Killdeer's own.

Left to themselves, the Pectorals moved about with quiet grace and assurance, and without that waste motion which is so characteristic of the Solitary Sandpiper (*Tringa solitaria cinnamomea*) or the Yellow-legs (*Neoglottis flavipes*), to both of which, in character, they bear a superficial resemblance. The name "Grass Snipe" seemed fitting, for they often alighted in the center of a thick cluster of grass-stems or of salicornia in preference to open water, and they sometimes took refuge in such cover when gently pressed, instead of taking to wing. The birds were always silent, and if the camerist was anywhere in the vicinity, feeding was either suspended outright or carried on furtively. Sometimes a bird would stand motionless, peering over a grass patch, for ten minutes at a stretch.

Much better opportunities of studying these birds are afforded in the Mississippi Valley, during migrations. When startled, a flock of, say, fifty of these Sandpipers moves off as one bird, wheeling and turning at precisely the same moment, and presenting in the early morning a

Taken in Monterey County
Photo by the Author

GRASS SNIPE AT ELKHORN

Taken in Santa Barbara
Photo by the Author

A DINNER GUEST

pleasing alternation of flashing white, when the underparts are exposed, and somber gray, when the backs appear. While on the wing, the birds keep up a cross-fire of peculiar, wild, creaking notes; but upon alighting, they scatter widely in search of food and are mainly silent. They both glean and probe on land, or wade about busily in the grassy plashes. At the approach of danger the waders will often crouch low upon the ground in the hope of escaping observation. In the autumn, when each individual shifts for itself, the bird is said to lie well to a dog; and upon being flushed it moves off with a rapid zigzag flight much admired by the knights of the reeking tube.

Very interesting accounts of the breeding habits of these birds in their Alaskan home reach us through the pen of Mr. E. W. Nelson. According to this careful observer, the males are able to distend the loosened skin of the breast, inflating it, together with the esophagus, with air until it becomes nearly as large as the rest of the body. With these absurd appendages they run up and down before the females, or essay strange sallies in the air. While engaged in these attempts to win attention, they utter notes which are hollow and resonant, but at the same time liquid and musical, and may be represented by a repetition of the syllables *too-u*, *too′-u*, *too′-u*.

BAIRD'S SANDPIPER

No. 239

Baird's Sandpiper

A. O. U. No. 241. **Pisobia bairdi** (Coues).

Description.—*Adult in summer:* Upperparts fuscous, with considerable edging of buffy and light brownish gray,—the buff mostly in lateral striping on top of head and hind-neck, where predominant, and as terminal edging on back, etc.; some whitish edging on coverts, secondaries and inner quills, but no strong shades or contrasts anywhere; upper tail-coverts and tail dark fuscous, the former tipped with buff, and the latter edged with whitish, the outer feathers becoming much lighter; forehead and supraloral streaks pale buffy or whitish; throat white; the sides of the head, neck and breast with a heavy buffy suffusion, lightly and finely spotted and streaked with brownish dusky; remaining underparts white. Bill and legs black. *In winter* the shades of the upperparts are a little more blended. *Immature:* Similar to adult, but buffy suffusion of head, neck and breast more pronounced; the feathers of back

and scapulars rounded, with conspicuous, white terminal edging; the streaking of breast, etc., less distinct. Length (av. of 8 Alaskan specimens): 192 (7.56); wing 119.3 (4.70); tail 50.3 (1.98); bill 21.2 (.83); tarsus 22.7 (.89).

Recognition Marks.—Sparrow size, but appearing larger; about the size of a Spotted Sandpiper; dull fuscous and buffy coloration of upperparts; buffy breast streaked with fuscous; upper tail-coverts *not* white. To the superficial glance a smaller counterpart of *P. maculata;* streaking of chest a little less sharp; paler, less rufescent, above.

Nesting.—Does not breed in California. *Nest:* A slight hollow on dry tundra, or sometimes partly hidden in overshadowing vegetation. *Eggs:* 3 or 4; ovate, pointed; deep olive-buff, heavily and sometimes finely spotted with brownish black or sepia. Av. size 32 x 21.6 (1.26 x .85); index 67.4. *Season:* June; one brood.

General Range.—Breeds along Arctic Coast of America from Point Barrow to Keewatin. Migrates to South America (as far as Chile) by way of Mexico. In the United States passes chiefly between the Rocky Mountains and the Mississippi River, but also occurs irregularly upon both coasts and at scattered interior points.

Occurrence in California.—Spring and fall migrant coastwise; of regular occurrence at Santa Barbara, but apparently less observed elsewhere. One record from the interior: Fish Springs (Imperial County) April 28, 1917.

Authorities.—Sharpe (*Heteropygia bairdi*), Cat. Birds Brit. Mus., vol. xxiv., 1896, p. 570 (three spec. listed from "California"); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 8 (Santa Barbara; migr. dates); *Wyman*, Condor, vol. xxi., 1919, p. 172 (Los Angeles Co.).

"ONE little sandpiper and I." It had been a tedious and profitless day at Sandyland. Birds were scarce and ill-behaved, and the Graflex had become very heavy. The beach dragged along in a birdless monotony and the waves snickered and hissed upon the sloping sands in mocking irony. There was nothing for it but to give it up as a bad job and hike along barefoot to the patient, homebound automobile. But all at once a Baird Sandpiper came winging down the wind, saw the birdman, hove to, and settled amiably on the beach, some forty feet beyond. I am so manifestly the decoy bird that I determine to turn the piper's curiosity to account. The bird is wary at first, but by patient persistence the photographer succeeds in gaining a point directly opposite, up the same slope, and not over thirty feet away. The bird prefers to feed just below the edge of the highest wave-wash, and is especially careful to inspect the light row of freshly stranded kelp. It has a dislike of the wetter sand, and as often as the wave itself comes too close, the bird either takes to wing with a startled cry or else scampers up to the high sands. As it feeds it follows the sinuosities of the wave-edge, and I endeavor to parallel its course, with the camera ever trained. Gradually the distance narrows,

"As up and down the beach we flit
One little sandpiper and I,"

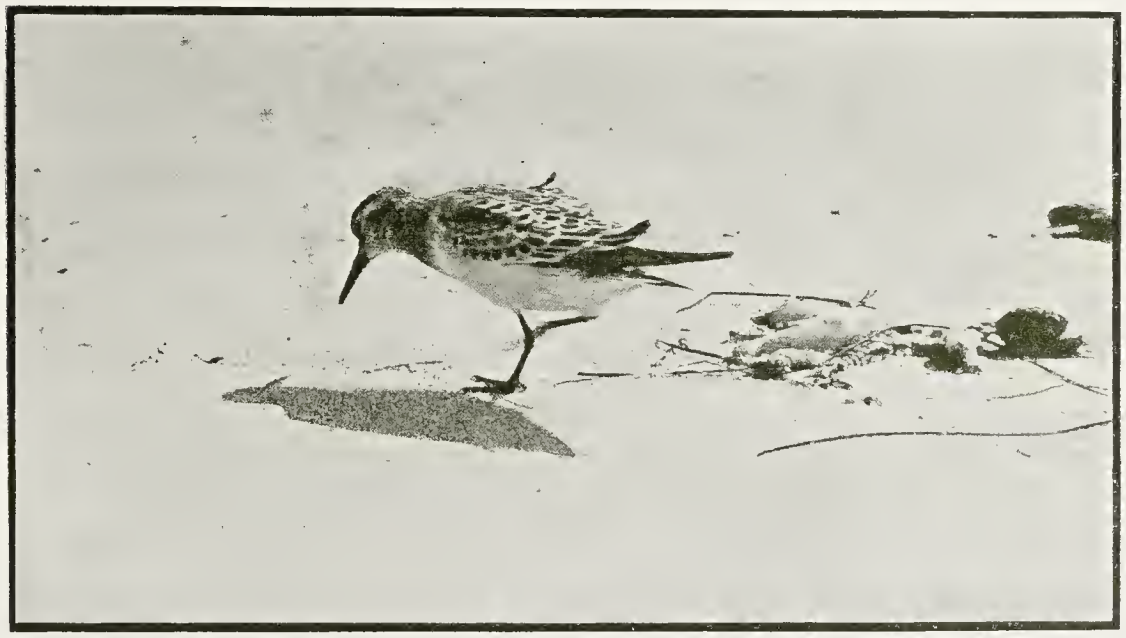
until twenty feet, and then fifteen, becomes the permissible range. The bird is perfectly aware of my presence, and keeps a watchful eye in my direction. Often it pauses to study my conduct—most exemplary, I swear—and several times it has resented my too ardent wooing either by flitting to a little remove or else by endeavoring to double on its tracks. It could as easily desert the scene outright, but it seems held by some subtle sense of companionship, or by some feeling of safety in this presence. "This great creature with the black box in his arms is, no doubt, like myself, a migrating bug-hunter, pausing momentarily on the shores of time."

Of course I was working my special graft all this while. For the last two plates I swung around heedless of the engulfing wave, and took the seaward aspect of my little protegè. This also seemed as it should be—to the long of leg belong the deeper prizes—and the piper clung to its chosen line of research, quite undismayed. The birdman, meanwhile, was photographing *down* the sun, a rare privilege on this south-sloping shore.

The marvel of it all stirs one to admiration, and the confidence displayed touches a chivalrous chord in the heart.

> "Stanch friends are we, well tried and strong,
> One little sandpiper and I."

"You have won my heart, little piper; and I'll tell the governor that you



Taken near Santa Barbara *Photo by the Author*

ONE LITTLE SANDPIPER
THE COMPANION OF A SEASIDE STROLL

are not to be shot except by glass-eyed guns. But now, good-bye, little piper. It's a shame to leave you; but you know, really, I can't put you into my pocket."

Baird's Sandpiper has, until recently, been regarded as an exceedingly rare migrant in California. Mr. Joseph Mailliard recorded the taking of a specimen at Mt. Pinos on August 25, 1897, as the second capture for the State. The birds are of regular occurrence at Santa Barbara in August, and have been seen in spring (e. g., May 2, 1913), so that it seems altogether probable that their earlier occurrence has simply been overlooked. On the other hand, it is known that the bird has a wide migration range in the interior, where it is fond of touching at glacial lakes and cirques at the highest elevations. It is essentially a boreal bird, for it breeds along the shores of the Arctic Ocean from Point Barrow eastward, and winters among the Andean lakes of Chile.

No. 240

Least Sandpiper

A. O. U. No. 242. **Pisobia minutilla** (Vieillot).

Synonyms.—American Stint. Peep.

Description.—*Adult in summer:* Upperparts brownish black, relieved by fuscous on wings, hind-neck, etc., the feathers more or less bordered with grayish and rusty ochraceous, especially on scapulars, where deeply indented, often nearly to shaft; upper tail-coverts and central feathers of tail brownish black; remaining tail-feathers ashy gray; sides of head, neck, and breast pale brownish or buffy, spotted and streaked with dusky; a few dusky streaks on sides; remaining underparts white. Bill blackish; feet and legs yellowish green. *Winter plumage:* Above plain brownish gray, black, if at all, only in mesial streaks; spotting of breast nearly obsolete, but breast heavily washed with grayish brown. *Immature:* Similar to adult in summer, but without ochraceous indentations on scapular feathers; feathers of back with rounded rusty tips; scapulars with white tips on outer web, etc.; breast less distinctly streaked. Length 152.4 (6.00); wing 91.4 (3.60); tail 43.2 (1.70); bill 17.6 (.69); tarsus 18.5 (.73).

Recognition Marks.—Warbler to sparrow size; least among Sandpipers; most liable to be confused with *Ereunetes pusillus* and *E. mauri*, from which it differs in its slightly smaller size, slenderer and shorter bill, more extensively washed breast, rather darker coloration above; and lighter, more greenish feet and legs. The absence of webs on the feet is, of course, distinctive.

Nesting.—Does not breed in California. *Nest:* A grass-lined depression on ground or hollow in moss. *Eggs:* 3 or 4; pale olive-buff or pale greenish buff, spotted and marked lightly or heavily, often finely, with reddish brown (bister to burnt umber) with duller shadows. Av. size 27.9 x 20.3 (1.10 x .80). *Season:* June; one brood.

General Range.—North and South America. Breeds from the Magdalen Islands, Nova Scotia, southern Ungava, central Keewatin, and the Yakutat Bay dis-

Portrait of Least Sandpiper

From a photograph by the Author

Taken at Sandyland

trict of Alaska, north to northwestern Alaska and the southern Arctic islands. Migrates throughout the United States. Winters from California, Texas, North Carolina, etc., south to Brazil and Peru, and on the Galapagos Islands. Has occurred in Greenland, in northeastern Siberia, and in England (2 records).

Distribution in California.—Abundant during migrations throughout the State. Winters commonly west of the Sierras, and from San Francisco Bay through the San Diegan district. Non-breeding birds are to be found during the summer.

Authorities.—Cassin (*Tringa wilsonii*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 721 (Petaluma); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 41 (distr. and migr.); *Moore*, Auk, vol. xxix., 1912, p. 210 (Magdalen Ids.; breeding dates).

LITTLE children of the marshes! Dainty, lisping, pattering pipers! Confiding fairies, heritors of an elder world, left stranded on the roaring shores of time! How may we, whose eyes are inflamed with covetous passion, whose ears are deafened with the sound of our own instruments of destruction, and whose hands are red with blood, how may we face your gentle innocence? And how may we endure the light of confidence in your mild eyes? God made you to rebuke our follies, and God has kept you tender and trustful in order that we may mend our ways.

Taken near Santa Barbara A HESITANT APPROACH *Photo by the Author*

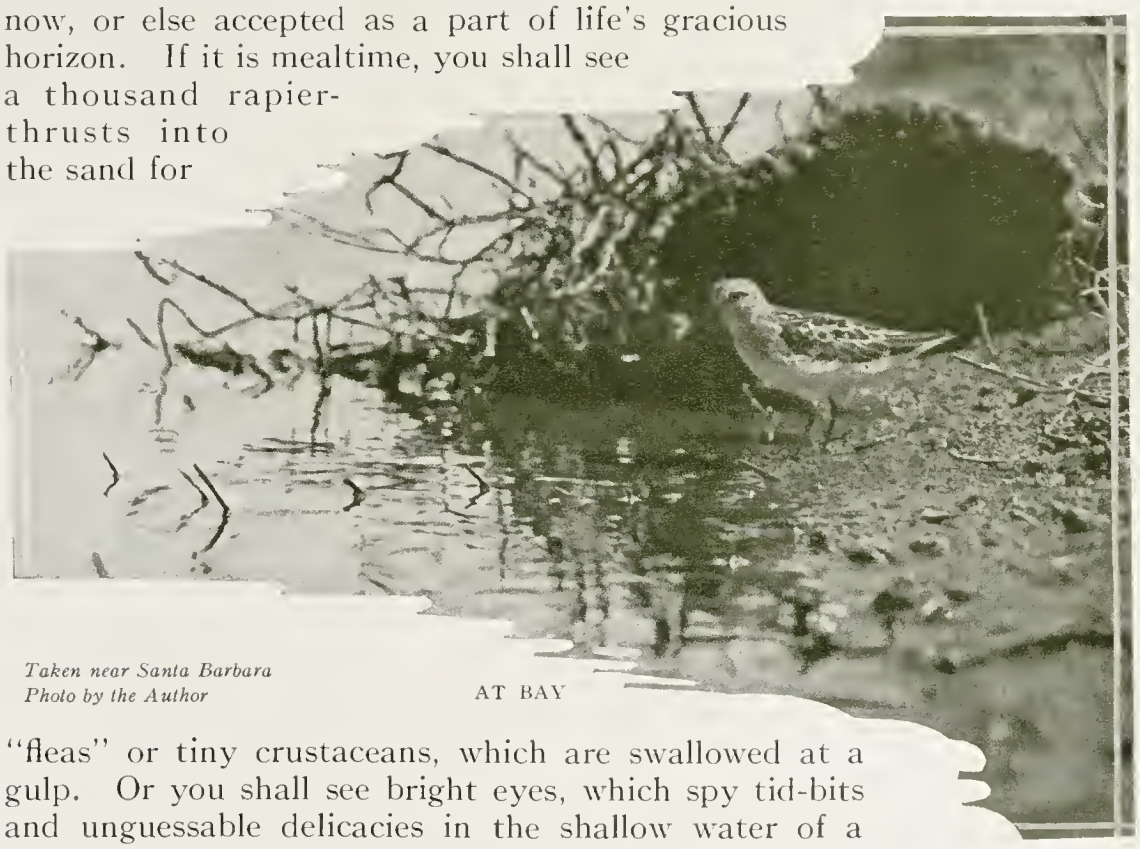
In sober truth, a man does well to approach a company of these tiny pipers on bended knees. He cannot deserve such good fortune as to be taken into full fellowship, but by a proper show of humility he may at least be permitted to see them in their innocence, dainty and unconscious;

The Least Sandpiper

Taken near Santa Barbara *Photo by the Author*

and he may guess for himself what influences have wrought to preserve so exquisite a thing in a world that reels with shock and countershock of human strife. Down upon your knees, then, or down on hands and knees to try if they will have you. You will suffer first, besides certain physical discomforts of untried muscles, you will suffer pangs of conscience, that your fellows, or yourself, perhaps, have ever betrayed these innocents. For the uneasy shiftings and incipient retreats which you see are manifestly no part of *minutilline* nature, but only an aftergrowth wrought by centuries of gun-fire. Then, mayhap, the Killdeer, remembrancer of our ancient sins, though evil-minded himself, will rehearse the danger and urge the little waifs to flight. But they, confiding souls, though swept off their feet by a sudden onslaught of evil counsel, will return presently to the same spot, forgiving, or else loth to believe so monstrous an accusation. A momentary pause, and then a babel of tiny sounds ensues. Life in all its varied functions breaks out afresh. Toilets are

made with many flashing strokes of that factotum tool, the bill; wings are stretched, and their filmy draperies are rearranged to a fairy's taste. If you have been discreet, you are either forgotten by now, or else accepted as a part of life's gracious horizon. If it is mealtime, you shall see a thousand rapier-thrusts into the sand for



Taken near Santa Barbara
Photo by the Author

AT BAY

"fleas" or tiny crustaceans, which are swallowed at a gulp. Or you shall see bright eyes, which spy tid-bits and unguessable delicacies in the shallow water of a brackish pool or on its oozy bottom; and the Peeps will wade about belly-deep, thrusting their heads under water as fearlessly as ducks. Or if it is the siesta, most privileged of hours, you shall see little beaks thrust under wing, and slumber at a rod's remove as sweet and

Taken near Santa Barbara *Photo by the Author*

A TRUSTFUL COMPANY

perfect as though conducted under the shimmering canopy of an Arctic sky.

Least Sandpipers may be found almost anywhere in winter in the warmer parts of California, in the vicinity of lakes and ponds and lowland plashes, about brackish lagoons, more rarely upon sloping shores. Their numbers, however, are never so great as during migrations, since the bulk of this species winters still further south. They mingle freely with birds of either species, especially with Western Sandpipers (*Ereunetes mauri*). Sometimes they occur in flocks numbering thousands, but these occurrences are notably rarer than of yore.

According to those who have made a close study of this species, as in the Canadian and sub-Arctic regions, it is not easily possible to exaggerate the confiding nature nor the winsome grace of the Least Sandpiper at home. The female who, for a season at least, has sole care of the nest, will patter about the very feet of the intruder, or else return to the nest at any cost, even under the threat of an overarching hand. On such occasions, also, she indulges in a song, remarkable not alone for its pathos, but for its variety and musical quality as well. This song is heard at its best in mid-air, and the ecstasy of the song-passion sometimes takes the performer out of sight. But what is this? She has pleaded, she has confided, she has even offered her body with its little spoonful of meat as a ransom for her little ones. Is it not enough? Then she will sing you a song, full-hearted, exultant, sacrificial; she will win you from the flesh with its paltry lusts, and summon to a like high-minded sacrifice—to *faith*, in fine. O joy of trust! O victory of sacrifice! O anthem fitly echoed in the human heart!

Taken near Santa Barbara *Photo by the Author*

A REPEATER

IT'S ONLY ONCE A YEAR THAT A POOR PHOTOGRAPHER BODY GETS SUCH A WILLING MODEL

No. 241

Red-backed Sandpiper

A. O. U. No. 243 a. **Pelidna alpina sakhalina** (Vieillot).

Synonyms.—American Dunlin. Ox-bird.

Description.—*Adult in winter:* Above, nearly uniform light brownish gray, the feathers slightly darker centrally, or with dusky mesial streaks; primary coverts and wing-quills blackish; the greater coverts white-tipped; the inner primaries narrowly white-edged; the secondaries increasingly white on the inner web; the tertials almost entirely white; upper tail-coverts like back or darker, but the lateral feathers white or white-edged; an impure whitish superciliary line; lower eyelid white; sides of head and neck and across fore-neck and breast like color of back, but lighter; the color distributed centrally from the feathers, giving a faintly streaked appearance; remaining underparts white, or with a few gray streaks on sides. Bill longer, stouter, slightly decurved near tip, black; feet and legs black. *Adult in summer:* Upperparts black centrally with broad margining of bright rusty ochraceous; wings as before; breast, etc., grayish white, sharply streaked with dusky; belly *black*, strongly contrasting with breast; crissum, etc., white. Length 193-222.3 (7.60-8.75); wing 119.4 (4.70); tail 58.2 (2.29); bill 38.1 (1.50); tarsus 27.8 (1.09).

Recognition Marks.—Towhee size (considerably under Killdeer size); bright rufous of back and black of belly of breeding plumage distinctive; soft brownish gray of upperparts and breast; rather long black bill, slightly *curved* near tip, distinctive for plumage commonly seen.

Nesting.—Does not breed in California. *Nest:* A mere "scrape" on the ground, lined or not with leaves and grasses. *Eggs:* 4; pointed ovate, olive-buff to deep olive-buff, or water-green, boldly, heavily, and often broadly marked (sometimes in spiral or "twisted" fashion) with reddish brown (Prout's brown, deep mummy-brown or bister), with snuff-brown under-shell markings. Av. size 34.5 x 24.6 (1.36 x .97); index 71. *Season:* June; one brood.

Range of *Pelidna alpina.*—Breeds in the northern portions of the Northern Hemisphere; winters south to the Indian Ocean, Red Sea, Mediterranean, Gulf of Mexico, and Lower California.

Range of *P. a. sakhalina.*—North America and eastern Asia. Breeds on the northern coast of Siberia west to the Yenisei; in Alaska from the mouth of the Yukon and in northern British America. Winters sparingly on the Pacific Coast of the United States, more commonly in Lower California, and on the Atlantic and Gulf coasts from New Jersey to Texas, and in Asia from Japan south to the Malay Archipelago. Also occurs sparingly in the interior of the United States.

Distribution in California.—Fairly common migrant along the coast and casually inland. Winters sparingly from San Francisco southward, and has been found both in the Sacramento and San Joaquin valleys.

Authorities.—Cassin (*Tringa alpina, var. americana*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 719 (Petaluma); *Nelson*, Rep. Nat. Hist. Coll. Alaska, 1887, p. 110 (breeding habits, nest, eggs, etc.).

SAVE during the spring migrations, when the black of the belly is a conspicuous sign, it is not easy to distinguish this bird from the more

Taken near Santa Barbara — *Photo by the Author*

A SILHOUETTE

RED-BACKED SANDPIPER IN FALL PLUMAGE

numerous Westerns (*Ereunetes mauri*) with which it freely mingles. Although considerably larger than the Western, it also is called "Peep," and it shares several characteristics with its smaller kinsmen. For one thing, they are all fond of a ride. A floating log often proves an irresistible temptation to a passing flock, and they settle down upon it teetering and peeping lustily, as though it were the greatest treat imaginable. Even more ludicrous it is to see a great company of Sandpipers together with a few solemn gulls seated on the rear end of a moving log-boom. The convoying tug puffs officiously, while the water swirls away behind in dizzying eddies. But there are a hundred yards of stout cable and, it may be, a two hundred yard stretch of logs between the birds and the boat; so these urchins gather fearlessly and snicker over their good fortune in stealing a ride. A passenger on a passing steamer, catching the drollery of the thing, feels like bawling out: "Hey, Mister! Cut behind!"

The Red-backs are to be found upon the beaches and salt marshes of Humboldt Bay, San Francisco Bay, and Suisun, and in many southern localities at any time of year, save June and July, when they are at home in western Alaska. They are, however, not common in winter, and the migratory movement may be distinctly traced. The birds appear to acquire the full nuptial dress before starting out upon the northward migrations, but they not infrequently return in late summer before they have had time to lay it off. This species also wanders extensively into the interior, and stray birds may be picked up in almost any situation which provides water.

In feeding, the Red-backs usually maintain close order, and in flight as well, so that hostile fire is very destructive to their ranks. One shot

seldom suffices to teach its lesson of caution, and they are back again the next minute to look after their comrades, and to invite repeated slaughter. Suckley tells of an army officer of his acquaintance who once tumbled ninety-six birds at a single discharge of his fowling piece. It is, perhaps, needless to add that there ar'n't enough birds to go around at that rate.

A photographer comes to believe that this species is warier than most of its near relatives. Anyway, it was the last one of thirty to fall victim to my camera at Santa Barbara. Partly for that reason, and partly because Sandpipers are not on dress parade in winter anyhow, the writer has to confess a dearth of first-hand information regarding the species, and he finds only the most matter-of-fact and, therefore, least informing references to it in Californian literature.

It is only those who have been privileged to follow some of our lesser visitors to their northland homes who feel the impact and flavor of their distinguishing personalities. Chief among this privileged class is Mr. E. W. Nelson, who, writing from St. Michaels in the late Seventies, says of these birds: "Soon after they arrive in spring they are engaged in pairing, and the male may be seen upon quivering wing flying after the female and uttering a musical, trilling note, which falls upon the ear like the mellow tinkle of large water-drops falling rapidly into a partly filled vessel. Imagine the sounds thus produced by the water run together into a steady and rapid trill some five or ten seconds in length, and the note of this Sandpiper is represented. It is not loud, but has a rich, full tone difficult to describe, but pleasant to hear among the discordant notes of the various water-fowl whose hoarse cries arise on all sides. As the lover's suit approaches its end, the handsome suitor becomes exalted, and in his moments of excitement he rises fifteen or twenty yards, and hovering on tremulous wings over the object of his passion, pours forth a perfect gush of music, until he glides back to earth exhausted, but ready to repeat the effort a few minutes later."

Taken near Santa Barbara *Photo by the Author*

A MIXED COMPANY

THE BIRDS WITH BLACK BELLIES ARE RED-BACKED SANDPIPERS; THE OTHERS ARE WESTERNS

No. 242

Western Sandpiper

A. O. U. No. 247. **Ereunetes mauri** Cabanis.

Synonyms.—Western Semipalmated Sandpiper. Peep. Sand-peep. Ox-eye.

Description.—*Adult in summer:* Above mingled black, grayish brown, bright rusty and whitish—black and rusty alternating boldly on centers of feathers, the gray chiefly margining and subterminal, the white narrowly on tips of feathers only; rusty confluent on auriculars and on edges of crown into ill-defined aureole; wing-quills brownish black; upper tail-coverts black centrally, white laterally; central pair of tail-feathers black, the remaining pairs brownish gray; underparts white (the cheeks, lower neck, and breast broadly), marked sharply with grayish brown and blackish; a few scattering arrow-heads of dusky along sides. Bill black; feet and legs greenish dusky. *Adults in winter:* Rusty nearly wanting. Above chiefly plain grayish brown, with darker shaft-streaks in central area; dusky spotting of chest, etc., similarly reduced to narrow, sharply defined mesial shafts. *Immature:* Similar to adult in summer, but feathers of back and scapulars rounded, and with conspicuous edgings of rufous or white; breast tinged with buffy, and marked sparingly with dusky on sides only. Measurements: Adult female, length 167.4 (6.59); wing 97.2 (3.83); tail 44 (1.73); bill 26.9 (1.06); tarsus 24.9 (.98). Adult male, av. of 10: length 152.5 (6.01); wing 91.3 (3.59); tail 41.7 (1.64); bill 22.8 (.90); tarsus 21.6 (.85).

Recognition Marks.—Sparrow size; a little larger than *Pisobia minutilla*, from which it may be distinguished by longer, stouter bill, somewhat lighter coloration of back, clearer white below, with streaked area of breast not so extensive; partial webbing of feet, of course, distinctive.

Nesting.—*Nest:* On the ground, or bedded in sphagnum moss. *Eggs:* 4; warm buff (tilleul buff) or more rarely olive-buff, marked heavily and often very finely with reddish brown (Rood's brown or walnut-brown to burnt umber or even blackish). Av. size 29.7 x 21.3 (1.17 x .84); index 71. *Season:* June; one brood.

General Range.—Breeds in Alaska from Kotzebue Sound south to Yukon mouth. Migrates chiefly west of the Rocky Mountains and coastwise, but also appears on Atlantic Coast from Massachusetts southward. Winters from North Carolina and southern Lower California south to Venezuela and Peru.

Occurrence in California.—Abundant migrant, chiefly coastwise; but also of casual appearance at interior points. Winters sparingly along the coasts, and especially in the San Diegan district.

Authorities.—**Cassin** (*Ereunetes petrificatus*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 742, part (Presidio; Petaluma); *Nelson*, Rep. Nat. Hist. Coll. Alaska, 1887, p. 113 (St. Michael, Alaska; breeding habits, nest, eggs, etc.); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 47 (distr. and migr.); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 9 (Santa Barbara; migr. dates).

"SAND PEEPS are almost too well known to require comment"—and as a consequence, comments upon the Western Sandpiper are few, and our knowledge of the species is a little hazy and lacking in detail. Yet

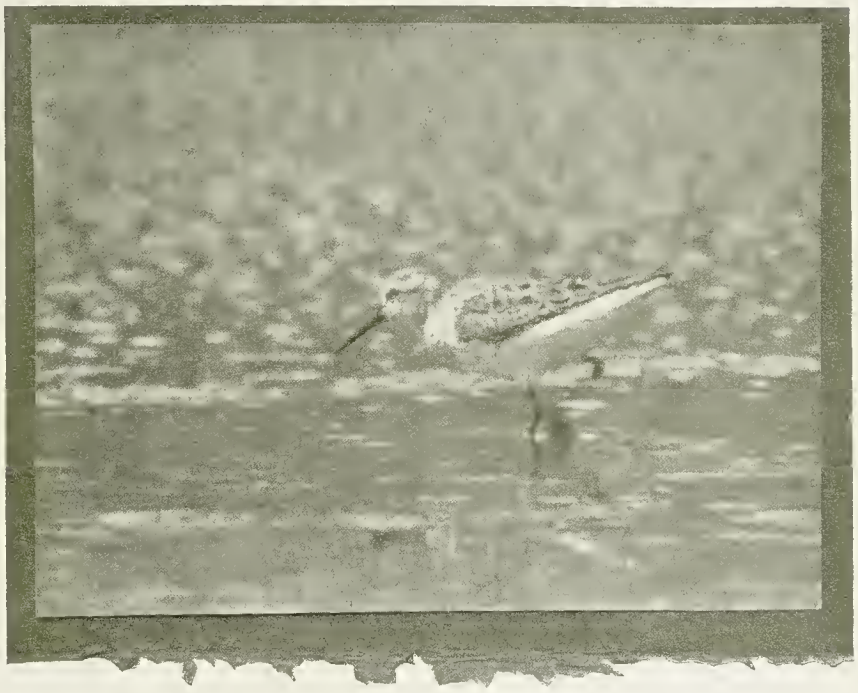
Narcissus—A Western Sandpiper

From a photograph, copyright 1913, by W. L. Dawson

Copyright 1913 by W. L. Dawson

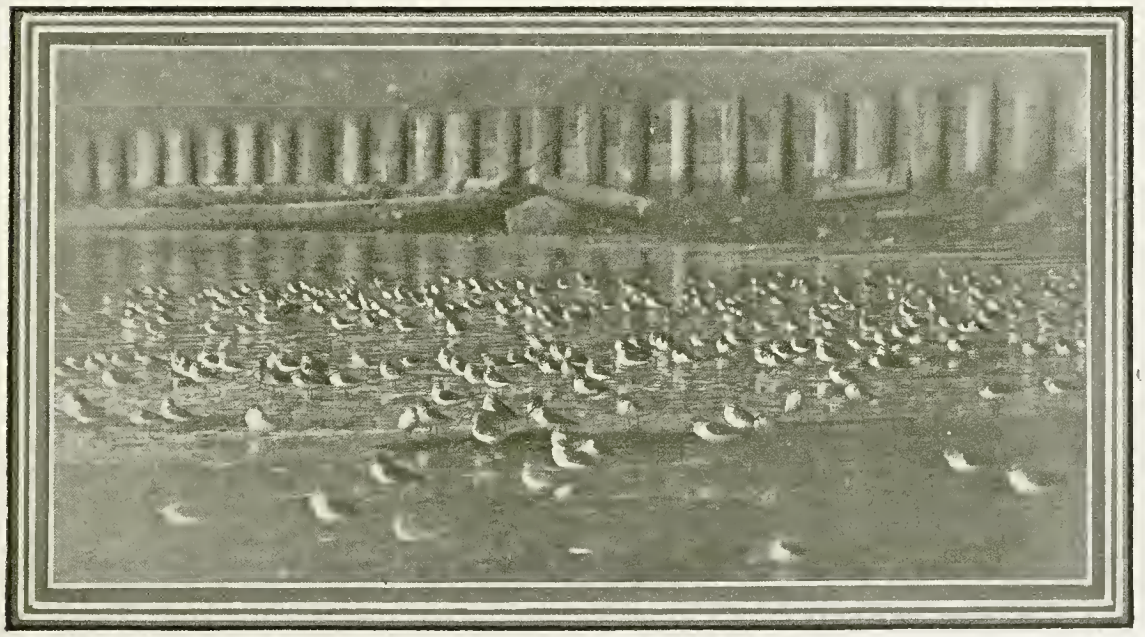
our mud flats and sandy shores are visited in fall and spring by myriads of these confiding voyageurs. While they are most abundant in late April or early May, and again in August and September, we yet have a little sprinkling of them throughout the year, so that ignorance of them is without excuse.

A mud flat, left bare by the receding tide, is the most favorable for study; and here our little friends gather in companies which sometimes number up into the thousands. The company is oftenest "mixed" with Least Sandpipers (*Pisobia minutilla*). Sometimes it is "fine-mixed," with Sanderlings or Red-backed Sandpipers or (especially along shore) with Semipalmated



Taken in Santa Barbara *Photo by the Author*

AN INNOCENT TROPHY

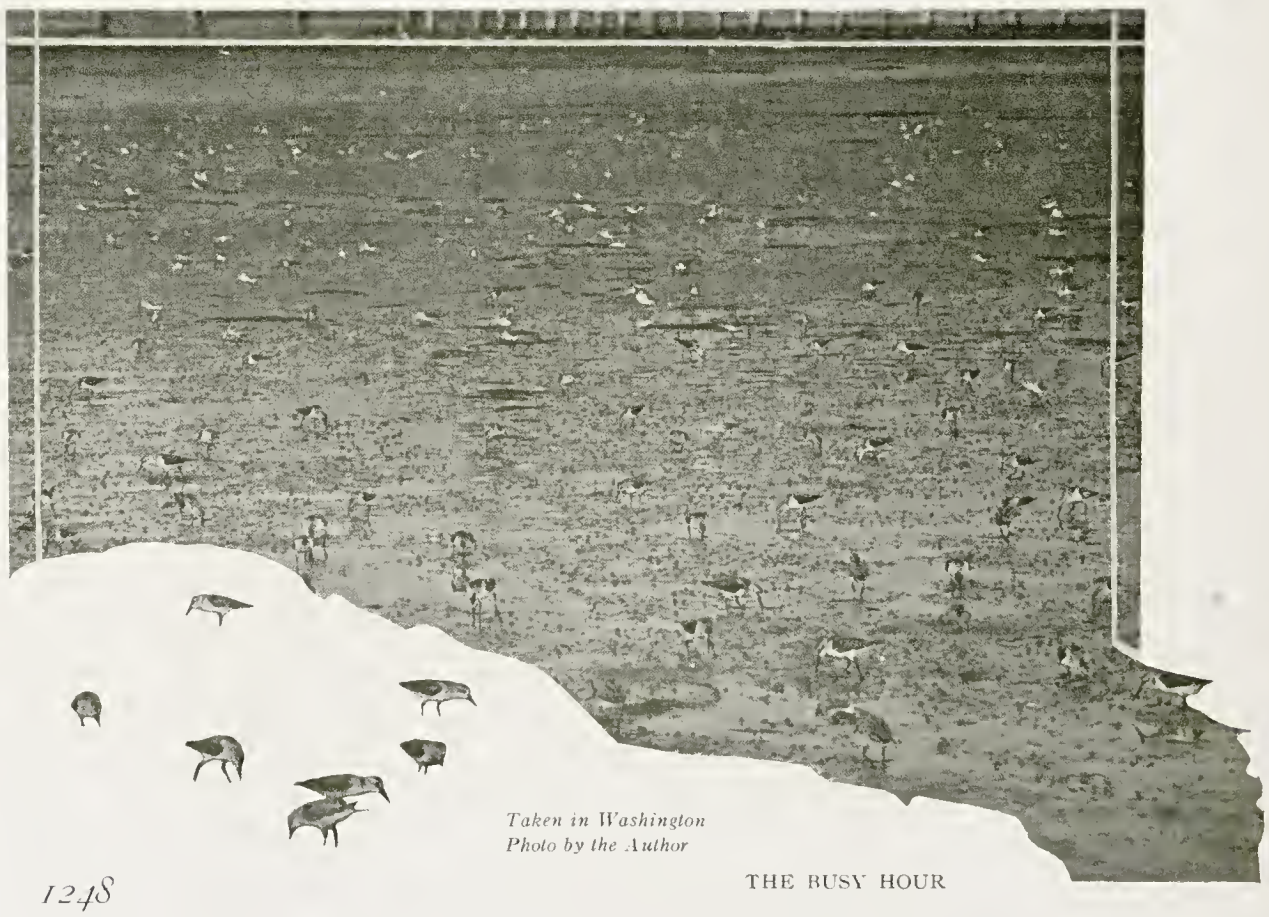


Taken in Washington *Photo by the Author*

THE BIVOUAC

Plovers. Often a company of these little tots, of whatever degree of mixture, will attach itself to some larger wader, a Knot or a Willet or a Long-billed Dowitcher, and the amiable giant, so adopted, is obeyed implicitly in subsequent evolutions.

No better opportunity is afforded to study and speculate upon the mystery of flock movement than in the case of these gentle peeps. In flock flight they weave and twist about, now flashing in the sunlight, now darkening to invisibility, charge and recharge, feint and flee, all as a single bird. And because they keep up a dainty chattering, like a fairy rattle-box, one cannot decide whose voice in the babel has authority. Upon alighting, they first pause in absolute silence, absurd little Platos, done in plaster and sown broadcast over the sandscape. This, that they may note whether their coming may have provoked hostile notice. Reassured upon this point, they become animated, and begin to patter and pick and probe and peep, as though there were nothing else in life. There is something so detached about their happy chatter, that the birdman feels like an uninvited cow whose hulking presence the banqueting fairies are politely minded to ignore. The flock moves slowly forward and successive platoons rising from the devastated rear pass over their fellows to take turns at the



Taken in Washington
Photo by the Author

Taken in Washington *Photo by the Author*

THE DAY IS FOR REST

front. All is as merry as wedding bells, and the birdman with his camera is trembling with excitement. But suddenly one of the little soldiers is smitten with a fear-thought. Like an electric flash it is communicated to all his comrades. Instantly, in the dreadful hush which follows, the flock takes wing as one bird, and they pass out of hearing, arguing excitedly. Ten to one, after they have swept the horizon two or three times, the panicky member is outvoted, and the Peeps troop back confidingly to resume the pastures which they have just deserted.

At high tide the little fellows retire to the edges of the flats, where they either prepare elaborate toilets or else engage in one-legged slumbers. If the tide is too insistent, they do not mind standing in an inch or so of water. But it is delightfully absurd to see them economizing strength by the use of only one leg. Perhaps they want to keep one foot dry, for I have seen them hop about in a lazy tide pool, clearing the surface of the water at every jump, but never disclosing the missing member in the process. Or perhaps one of them had started a boyish dare, with a baby limpet as a prize to the one that held out long-

Taken in Santa Barbara *Photo by the Author*

FLUTTERING PEEPS

Taken in Washington *Photo by the Author*

PEACE

est. Anyhow, I think they all won, for as nearly as the eye could judge the birds hopped to wing without the assistance of the elevated foot, when startled from this position.

On another occasion when they wished to glean from the surface of a light water-weed which was too frail to support their weight, and in water too deep for wading, I have seen the birds maintain themselves with fluttering wings while they snatched their prey rapidly. The legs meanwhile were used for what they were worth, and as often as the water-weed did promise to support the weight thus, the wing-motion would cease momentarily. Seen breasting the wind in this fashion, the Peeps rather reminded one of Swallows, or even of Black Terns, although the fluttering was more uniform than the dab-and-dodge method of the Tern.

These little Peeps, by the way, swim as gracefully as Phalaropes when they are put to it. But they swim, apparently, only when tempted beyond their depth in pursuit of some escaping *edenda*, or when surprised by the inequality of the bottom.

It is a source of perennial interest to see how close one can get to a company of Sandpipers. If one has patience to lie motionless beside some salty plash, the birds will sometimes venture within touching distance. Nothing, to my mind, could exceed the flattery implied by the near

approach of these trustful creatures. If the compliment were really deserved, the cunning little souls would undoubtedly respond to the most familiar advances short of actual handling. Slaughter in the name of science may be justifiable, though there be those of us who have passed up the solution of many nice problems here; but slaughter of these innocents in the name of sport is mere Philistinism. The Italian method of hunting is to shoot everything in sight. As a result, sunny Italy is a birdless desert in summer, and a nightmare during migrations.

Fortunately, the camera is superseding the gun. Pressing the button is not only more humane than shooting; it is more fun. Measured by its devices, its strategies, its hopes and fears, its tantalizing failures and its crowning triumphs—in other words, by its thrills—bird photography is ten times better sport than gunnery. Its trophies, moreover, are permanent and satisfying. In place of an emptied plate and an endless regret, the camerist retains a record which delights the eye and ministers to the spirit unceasingly.

Taken in Washington *Photo by the Author*

A MOMENTARY ALARM

But do not envy the bird-photographer overmuch. He, too, has paid a price. If he has seemed to fellowship with the birds, it was only that he might get their images; and in getting these he has not seldom missed the birds themselves. The technique of photography, even snap-shottery, is quite exacting. One cannot both study and photograph birds at the same time. The camerist may score a success, and come away after an exciting brush with a rare species, flushed with triumph, yet knowing little of the bird's characteristic behavior and psychology. It is for your sake that he has wrought, and sacrificed mayhap his very opportunity to acquire that intimate knowledge of character which only the notebook may record. It is thus, I fear, with the Western Sandpiper. He is as common as mud, and as fascinating as a kitten; but, alas, he is photographically irresistible. We have forty-five negatives of the Western Sandpiper—and a flat notebook.

In these humiliating circumstances (and because we really cannot be expected to follow our guests in person to Alaska) we shall again have recourse to the treasury of that doughty observer, Mr. E. W. Nelson, of St. Michaels: "The warm days toward the close of May cause the brown slopes and flats to assume a shade of green, and among the pretty bird-romances going on under our eyes none is more charming than the courtship of this delicate Sandpiper. They have forsaken the borders of icy pools, and, in twos and threes, are found scattered over the tundra, showing a preference for small dry knolls and the drier tussock-covered parts of the country in the vicinity of damp spots and small ponds. Here the gentle birds may be seen at all times tripping daintily over the moss or in and out among the tufts of grass, conversing with each other in low, pleasant, twittering notes, and never showing any sign of the wrangling so frequent with their kind at this season. The female modestly avoids the male as he pays his homage, running back and forth before her as though anxious to exhibit his tiny form to the best advantage. At times his heart beats high with pride and he trails his wings, elevates and partly spreads his tail, and struts in front of his lady fair in all the pompous vanity of a pygmy turkey-cock; or his blood courses in a fiery stream until, filled with ecstatic joy, the sanguine lover springs from earth, and rising upon vibrating wings, some ten or fifteen yards, he poises, hovering in the same position, while he pours forth a rapid, uniform series of somewhat musical trills, which vary in strength as they gradually rise and fall, producing pleasant cadences. The wings of the songster meanwhile vibrate with such rapid motion that they appear to keep time with the rapidly trilling notes, which can only be likened to the running down of a small spring and may be represented by the syllables *tzr-r-e-e-e*, *zr-e-e-e*, *zr-e-e-e*, in a fine high-pitched tone with an impetus at each 'z.' This part of the song ended, the bird raises its wings above its back, thus forming a V, and

glides slowly to the ground, uttering at the same time, in a trill, but with deeper and richer tone, a series of notes which may be likened to the syllables *tzur-r-r-r, tzur-r-r.*"

Taken in Washington *Photo by the Author*

EXEUNT

No. 243

Sanderling

A. O. U. No. 248. **Crocethia alba** (Pallas).

Description.—*Adult in summer:* Crown and upperparts, in general, blackish with heavy edging of ashy white, and with much striping, sub-marginal marking, or indenting and barring, of pale rufous; forehead, sides of head, throat, and neck all around, and sides of breast ashy white, strongly tinted with pale rufous, and finely spotted with dusky; remaining underparts pure white,—the white well up on sides of rump, and including outer feathers of upper tail-coverts; wings, marginally, and including exposed portions of quills, fuscous; the greater coverts tipped with white, and the wing-quills changing to white on their inner webs and under surfaces; the inner primaries white basally on outer webs; tail dusky above, ashy gray on lateral feathers. Bill and feet black. *Adult in winter:* Wings dusky, varied, on middle coverts, etc., with white; central upper tail-coverts and tail-feathers dusky; remaining upperparts ashy gray (nearly pearl gray); the feathers, especially on crown, with dusky shaft-lines; entire underparts pure white. *Immature in fall:* Somewhat like adult in summer, but without rufous anywhere; back, therefore, showing more black, varied chiefly by white in scant edgings and tips, or in liberal indentations on scapulars and tertials; feathers of rump nearly square-ended, marked subterminally with light ashy gray, but tipped with a sharp, narrow band of blackish; underparts white,—or sometimes spotted on breast. Length 177.8-222.3 (7.00-8.75); wing 122.4 (4.82); tail 53.6 (2.11); bill 26.9 (1.06); tarsus 25.9 (1.02).

Recognition Marks.—Towhee size; fine, mottled rufous, ashy and black of spring birds; excess of white in fall specimens; black bill, strongly contrasting with adjacent plumage. Absence of hind toe, of course, distinctive.

Nesting.—Does not breed in California. *Nest:* A depression in ground, scantily lined with dried leaves and grasses. *Eggs:* 4; pointed ovate, dark olive-buff with a greenish cast, very uniform, marked finely, sparingly, and rather obscurely with bister. Av. size 35.8 x 23.1 (1.41 x .91); index 64.7. *Season:* Last week in June; one brood.

General Range.—Appears on nearly all shores, except those of the Australian sub-region. Breeds in high Arctic latitudes, and winters south from California and Virginia to Patagonia, and from the Mediterranean and Japan to Burma, Cape of Good Hope, etc.

Occurrence in California.—Common spring and fall migrant coastwise. Winters rather sparingly, but especially in the San Diegan district and on the islands.

Authorities.—**Heermann** (*Tringa arenaria*), Rep. Pac. R. R. Surv., vol. x., 1859, p. 65; *Dwight*, Auk, vol. xvii., 1900, pp. 374, 379 (molt); *Manniche*, Terrestrial Mam. and Birds n. e. Greenland, 1910, p. 139 (breeding habits; nest and eggs, etc.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 47 (s. Calif. ids.).

YOUR SANDERLING is the model Shore-bird. Simple in form, modest in color, regular in habit, and cosmopolitan in range, he stands forth as a sort of epitome, or generalized type, of the order *Limicolæ*. It is not alone because he lacks those eccentricities of dress or behavior which

Taken in Santa Barbara *Photo by the Author*

THE INNER CIRCLE OF PRIVILEGE

Taken in Santa Barbara *Photo by the Author*

OVERDUE

distinguish so many of his kinsfolk that we hail him chief, but because in structure and habit he is most exactly adapted to those special circumstances which constitute a shore. Pray consider what a very special sort of place a shore is. It is the meeting place of the two biggest things on earth; viz., land and sea. Taken broadly, it has all the variety of the one and the mystery of the other. It is the point of contact between two incommensurables, two practical infinities. It is the place of revelation, too; for the sea not only displays thereon examples of her own briny treasures, but she takes a tithe of all that the land has to give her and flings it back in scornful tribute on the shore. In width a shore may vary from a mathematical postulate, as where a glacier fronts the ocean with its wall of ice, to a teeming lagoon whose inner confines are leagues removed from the roar of the surf. In length it is all but measureless, stretching its single-stranded mazes a dozen times around the globe. In fortune, too, it varies from the placid sands of Coronado to the fearful crags of Magellan, or the cliffs of Norway, mocking with their granite Neptune's mightiest rebuff. Of such stress and variety and opportunity were the Shore-birds born,—the Shore-birds, who alone of living creatures have laid eyes on every coast.

But of Shore-birds, hundreds-rich in species, there is an inner circle of privilege, just as there is an inner belt of what we call the shore. The changes of the tide, with their recurrent wettings of the sand, mark out this inner belt of privilege. To a place at this magic table all Shore-birds may, indeed, aspire on occasion,—Turnstones, Godwits, Plovers, all these

and a hundred Pipers more; they know the feel of soft wet sand and they know the flavor of sand-fleas seasoned with a gulp of brine. But for one bird and one only is the highest place reserved. For within this special belt there is a very special line, a sinuous line which not in all Earth's

Taken in Santa Barbara *Photo by the Author*

HESITATION

history was ever twice the same, a line which has broken into a billion new curves while these words are being read. It is the edge of the wave which the Sanderling follows, and he is *the* Shore-bird *par excellence.*

The armies of Sanderlings constitute the most mobile militia in the world. They are not fighters, but they are eternally foraging, and they are as skilled in retreat as in pursuit. They charge upon the very heels of the retreating wave, snatching deftly the rations which the enemy has discarded; then turning at the exact moment when the waves are rallying, they scamper blithely just out of reach of their roaring antagonist. Forward and back, forward and back, they patter in ceaseless rhythm. Indeed, they seem themselves to be a part of the tidal mechanism, for they are swept along at the brink of the wave, a yeasty vanguard with foam-white breasts; and then, *dorso verso*, they disappear like bursting bubbles, blending their colors with the sands, which rustle with the wave's retreat.

It is a matter of pride with the Sanderling not to get wet more than belly-deep; hence, if need be, he accepts a little assistance from the lifted wing in running up-shore. None knows better than he the degree of a wave's determination, and though he has perfected a mighty stride and can pedal like the wind, flight, too, can be as instant. Being by habit so

Sanderlings and Surf

From a photograph, copyright 1925, by W. L. Dawson

Taken near Santa Barbara

Sanderlings and Surf

From a photograph, copyright 1923, by W. L. Dawson

Taken near Santa Barbara

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nimble, these birds think nothing of quitting a locality upon the slightest suggestion of danger up-shore. And for the same reason they do not hesitate to re-establish themselves at a few rods' remove. On the other hand, a person seated quietly on the sand, say thirty feet from the water's edge, may see a company of rather conscious pipers approaching up wind. The picking is good. It would be too bad not to finish the row. There are hesitations, huddlings, cautions, feints, and miniature retreats. They are as conscious as schoolboys about to say a piece. Finally, some brave Roderick makes a dash and goes scudding past. Others follow, and the ordeal is done without the humiliation of flight.

In observing a large flock which had been several times disturbed, I noted that immediately upon alighting at the water's edge they dispatched an attacking force up the beach slope to deploy as skirmishers over the dry, level sands at the top. When threatened, this vanguard invariably reassembled and pattered, or fled, down the slope to rejoin the reserves before taking final flight. This was done so quickly and so methodically as to argue the utmost familiarity of usage.

Although Sanderlings rarely visit the lagoons or mudflats, they spend a good deal of time resting in the upper sands; or after an elaborate toilet beside some tidal pool, they foregather with the gulls and take one-legged snoozes in serene content.

A single leg serves many birds as a prop during the hours of slumber, but it has remained for the Sanderling to perfect hopping as a means of locomotion. One's sympathies are aroused at first upon seeing one poor little piper making prodigious hops in the effort to keep up with the retreating wave—and doing very well at it too—but when he sees a dozen

Taken in Santa Barbara
Photo by the Author

A LITTLE ASSISTANCE FROM THE LIFTED WING

birds at once running about on one leg, he realizes that it is just a boyish prank. It's more fun than stilts, apparently, and never a broken nose to pay for it.

Sanderlings in their winter range occur chiefly in small flocks numbering from a dozen to forty individuals. Larger flocks, sometimes numbering hundreds, are, however, characteristic of the migrations. Sanderlings are rather independent in their associations, being at all times self-reliant and ready to back their own judgment. They are on good terms with the Black-bellied Plovers (*Squatarola squatarola*), and will tolerate Western and Red-backed Sandpipers, though they do not seek such companionship.

The Sanderling is the most widely and thoroughly distributed of all Shore-birds (save, possibly, the Turnstone, of which, however, *two* races are distinguishable, *Arenaria interpres interpres* and *A. i. morinella*), and it is not known to present any geographical variations. It breeds in the high Arctic regions, being among those found farthest north; and it winters on all continental, ice-free shores, save those of Australia. In migrations it occurs freely on inland waters, but it probably does not winter beyond the reach of the tide. It was formerly, probably erroneously, accounted rare along the Pacific Coast, where it is now recognized as common, but it is altogether probable that East Pacific migrants hail from breeding grounds which lie a little east of north.

Taken near Santa Barbara *Photo by the Author*

"FLIGHT CAN BE AS INSTANT"

No. 244

Marbled Godwit

A. O. U. No. 249. **Limosa fedoa** (Linnæus).

Synonyms.—Brown Marlin. Common Marlin. Spike-billed Curlew.

Description.—*Adult:* General color pale cinnamon or ochraceous-buff; the head and neck all around streaked and spotted with brownish dusky; the back, etc.,

Luncheon al Fresco

Marbled Godwits at Sandyland

From a photograph by the Author

heavily and irregularly barred with the same,—a typical feather from the scapulars has a broad dusky center shaped like a dandelion leaf, the complementary spaces being ochraceous-buff, or irregularly white; the primary coverts, and outer webs of three outer primaries brownish dusky; the breast (especially on sides), the sides, flanks, and lower tail-coverts, with fine wavy bars of dusky; the superciliary line and throat immaculate, pale buffy, or whitish; the axillars and lining of wings darker—say, pale cinnamon-rufous. Bill, slightly upturned, livid flesh-color, blackening toward tip; feet and legs blackish. *Immature:* Similar to adult, but immaculate on breast; sides and flanks less distinctly and extensively barred. Length 419.1-533.4 (16.50-21.00); wing 232.4 (9.15); tail 79.5 (3.13); bill 108.7 (4.28); tarsus 69.6 (2.74).

Recognition Marks.—Crow size; large size; long, slightly upturned bill; pale cinnamon coloration; "marbled" appearance of upperparts.

Nesting.—Does not breed in California. *Nest:* On the ground. *Eggs:* 3 or 4; olive-buff of varying shades, spotted or marked broadly but sometimes obscurely with burnt umber and violet-gray. Av. size 57.9 x 40.6 (2.28 x 1.60). *Season:* May 20–June 10; one brood.

General Range.—Temperate North America and South America. Breeds in a narrow range in Saskatchewan, Manitoba, and North Dakota. Migrates directly to all sea-coasts, formerly to Atlantic Coast as far north as Prince Edward Island, to southern portions of Hudson Bay, and on Pacific Coast as far north as Vancouver Island; now chiefly to Gulf Coast and to California Coast; thence south along coast of Mexico and Central America to Peru. Wintering from Gulf States and southern Lower California southward.

Occurrence in California.—Common migrant along or near sea coast; more abundant in fall. Winters sparingly even to Humboldt Bay. Not recorded from the islands.

Authorities.—Gambel (*Limosa fedoa*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 223 (Pac. Coast U. S. in winter); *Bent*, Auk, vol. xxiv., 1907, p. 160 (nesting habits, N. Dakota); *Bailey*, Condor, vol. xviii., 1916, p. 101 (habits; s. Calif. in winter).

Taken near Santa Barbara
Photo by the Author

STRANGE POSTURINGS

Taken in Santa Barbara *Photo by the Author*

A GOOD WIGHT

FOR MYSELF I confess an extravagant affection for the Shorebirds. It cannot be merely because they are so demure, so shy, or so gracefully engaging. Some of them are grotesque, some timorous to a fault, and some frankly hostile. Nevertheless, we get along famously. It must be because we love pretty much the same things, especially the shifting, thousand-toned sands, the impartiality of the tide, the ceaseless murmur of the waves, and the mysterious edge of the world—the meeting place of reality and romance. Anyhow, I love the Sanderlings, and the grey, shy, silent Plovers, and the sanctimonious Godwits,—homeless, careless, happy wanderers, every one.

The Californian's knowledge of the Marbled Godwit is likely to consist of a series of snapshots taken along the beach or on the flooded meadows of some shooting club. Four such pictures come to me out of the teeming records:

A group of eleven birds is ranged along the water's edge in such fashion that every motion is silhouetted against the gleaming sand. Sand-fleas, which, as the dictionary solemnly informs us, are amphipod crustaceans, are the order of the day. Strange posturings,—kiwi poses,open chopsticks, and figures of four—characterize the quest. The sand-fleas are not allowed to remain secure in their deep-dug wells, but are ruthlessly dragged out and swallowed in swift succession. As I approach, up-beach, there are signs of uneasiness, but a bevy of Turnstones, which I have been disciplining with the camera, settles among them and restores confidence. A few pause for meditation or digestion, while their companions continue their labors. Altogether

The Same Good Wight

From a photograph by the Author

Taken at Santa Barbara

they look like benevolent spooks, visitors from No-Country, as they alternately gaze upon me with steadfast, benignant eye, or fall to gobbling sand-fleas. The Turnstones, their voluntary wards, are first fearful, then frantic, as the distance between us lessens, and they fly away presently, shrieking that they have been betrayed, while the "good wights" themselves only edge away decorously.

It was a pretty sight to see three Long-billed Curlews, a Hudsonian or "Jack" Curlew, and two Marbled Godwits in bathing together. Again and again they soused themselves in the shallow pool or stood thigh-deep and splashed the water vigorously with their wings. Once the "Jack" squatted down and lay, chin-deep, upon the water, and with his back nearly awash, as though determined to get a good soaking. One of the Godwits "had a bite," and retiring to a shallow spot stood on one leg and kicked the base of his bill vigorously with the free foot at least forty times in succession. (Try that, boys!) After elaborate preening and a little bug-catching, ashore, the Long-bills said, "Well, boys, we must be going. One, two, three!" and rose together. The other birds looked dubious for a moment but decided to take a nap instead.

On the 14th of October, 1911, the day before "Opening Day," Dr. B. F. Alden was showing the birdman the courtesies of the "Empire" grounds, in Monterey County, and kindly volunteering the role of photographer's assistant. Pond "Ten" had a few ducks on it and something which interested us a great deal more, viz., Marbled Godwits, a dozen or more of them. The pond was really little more than flooded grass-land, and in this the Godwits delighted to stalk, or on the more solid portions to squat at rest. I refused several chances at them at decent range on account of the green background, which will not "take." If not pressed too hard, the birds, I found, would simply sneak away through the tall grass and not fly at all; but if they did fly, instead of breasting the wind or rising above the skyline, for a fair mark, they indulged in the reprehensible habit of letting go suddenly and whisking down wind quite out of range. The bird reserved for this occasion a childish and most ridiculous squawk which by no means relieved the tension of my nerves.

Tired at last of pursuing these elusive fowls, I turned my attention to an alluring little company of Northern Phalaropes playing on the water at my feet. I had just released the shutter on a group of these and was changing the plateholder, when I caught sight of my companion right in the range of my recent efforts, but a long ways off. The good doctor, supposing that I was still on the job, had succeeded in outflanking the enemy, and judging now that I was fully ready, made a rush at the juiciest bunch of Godwits I shall ever see. I shouted and—well, never mind if I did. It was enough to make angels weep to see fifteen Godwits rise in a

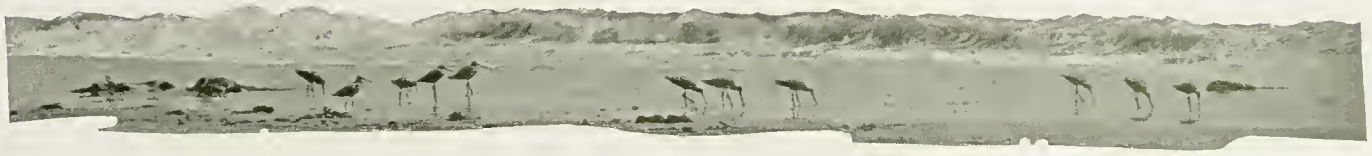
Taken in Santa Barbara "THE SANCTIMONIOUS GODWITS" *Photo by the Author*

bunch—rise above the skyline, and I without time to get into action.

In the fourth "picture" the camera does the talking and there really is nothing to say. The time was May 4, 1914, and the place Santa Barbara, within hail of a policeman. As we bowled along the East Boulevard we sighted two great, innocent Godwits feeding at the water's edge, where the beach is narrowest. They were letting two pedestrians pass at fifty feet, so we whirled about, unlimbered the camera, drove up alongside the curbing and opened fire from the auto. Then I made advances on hands and knees, or bellywise, in studious humility. Half scared, half curious, the birds retreated slowly, but I succeeded in getting within twenty feet of them on two occasions. The Godwits must have thought me a silly fellow, kowtowing to their prairie-bred majesties in such abject fashion. Or perhaps I was the great California Badger, of which they had heard. All right; we are willing to be all things to all birds, if by any means we may photograph some. Behold your servant the sand turtle, the stranded merman (Bing!—another exposure), the legless wonder, the omphlopophagus (Bing!—reverse and change). But the advent of a noisy truck occurring in conjunction with my own perigee—or periornis—puts the quarry to flight, gently murmuring.

The Marbled Godwits have suffered much from gunfire, and from invasion of their breeding haunts. Formerly nesting as far south as Nebraska and Iowa, they are now known as breeders only in a few spots

in southern Minnesota and North Dakota, and in the Canadian Provinces. The lake-sprinkled plains of Alberta and Saskatchewan are their principal summer home, and in leaving this they fly almost due east or west, being determined, apparently, to reach the seacoast at the earliest possible moment. The coastwise migrations are rather leisurely, and a few stragglers winter in the southern part of the State.



Taken near Santa Barbara THE GLEANERS *Photo by the Author*

No. 245

Greater Yellowlegs

A. O. U. No. 254. **Neoglottis melanoleuca** (Gmelin).

Synonyms.—Long-legged Tattler. Stone Snipe.

Description.—*Adult in summer:* General effect mottled black (grayish brown and brownish black) and white; underparts and upper tail-coverts white, immaculate on middle of belly and crissum, finely and sparsely blackish-spotted on throat, heavily blackish-streaked on sides of head and on neck all around; heavily spotted or wavy-barred on breast, sides, lining of wings, etc.; lightly barred on axillars and upon tail-coverts; upperparts mingled brownish gray and brownish black, varied by white or whitish; white occurring as streaks on head and neck, elsewhere as rounded terminal edgings or lateral indentations; exposed wing-quills plain blackish; tail blackish-and-white-and-gray barred. Bill, straight or slightly inclined upward, not with regular curve, but as if bent near the middle, black or greenish black; feet and legs chrome yellow. *Adult in winter:* Duller; spotting and barring of under plumage greatly reduced, chiefly confined to dusky streaking of lower neck and breast; above chiefly grayish brown or hair-brown (snipe-gray), margined with whitish; the blackish confined to lateral indentations of longer feathers, tertials, etc. *Immature:* Like adult in winter, but darker above, the white spotting with some admixture of brownish buff; sides of breast shaded with dusky. Length about 355.6 (14.00); wing 193 (7.60); tail 79 (3.11); bill 54.6 (2.15); tarsus 61 (2.40).

Recognition Marks.—Little hawk size; long yellow legs; *white upper tail-coverts*, with sober dusky-and-white coloration, distinctive for size; *tew, tew, tew* notes.

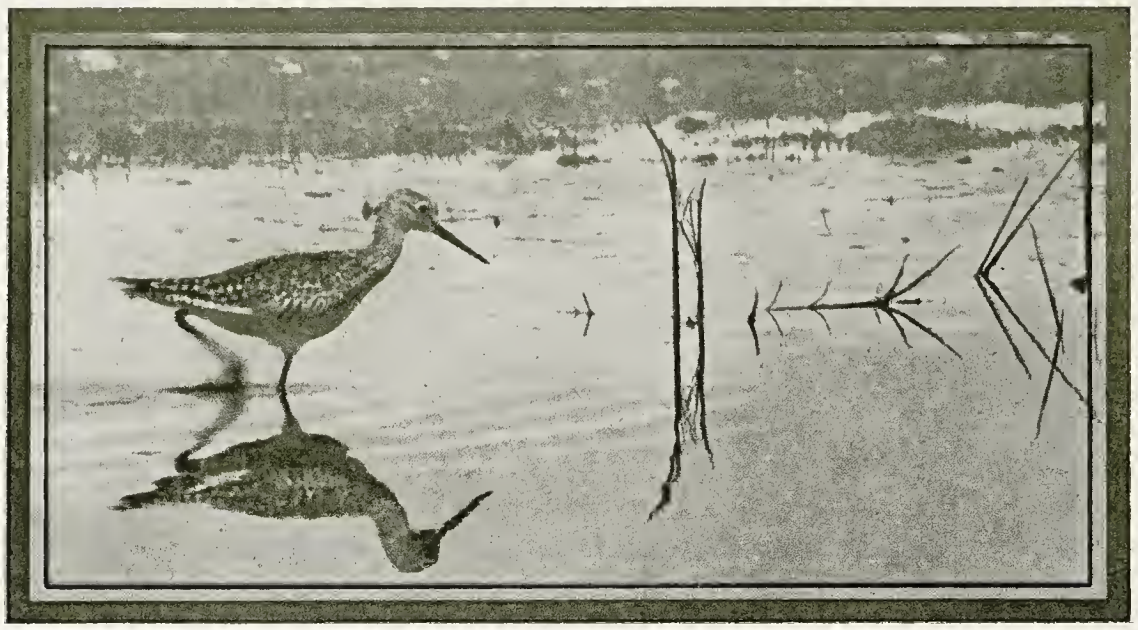
Nesting.—Does not breed in California. *Nest:* On the ground. *Eggs:* 3 or 4; "brownish buffy, distinctly but very irregularly spotted with rich vandyke or madder brown." Av. size 36.3 x 30.5 (1.43 x 1.20).

General Range.—North and South America. Breeds in British Columbia, southern Alaska, southern Mackenzie, Ungava, and Labrador. Migrates broadly throughout the interior, and winters from southern California and the Gulf States south to Patagonia.

The Greater Yellowlegs

Occurrence in California.—Of general distribution in the vicinity of water during migrations. Winters sparingly in the San Joaquin Valley, in the San Diegan district, and in the Colorado and Imperial valleys.

Authorities.—Gambel (*Totanus melanoleucus*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 223 (Pac. Coast U. S. in winter); *Brewster*, Bull. Mus. Comp. Zool., vol. xli., no. 1, 1902, p. 65 (western bird described as new subsp., *Totanus melanoleucus frazari*); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 9 (migr. dates at Santa Barbara).



Taken in San Luis Obispo County *Photo by the Author*

PORTRAIT OF GREATER YELLOWLEGS

OUR KNOWLEDGE of the Yellowlegs is absurdly limited to an enforced acquaintance with his voice. *Tew tew tew, tew tew tew*, he shrieks wherever he goes. With *tew tew tew* he invades the swamp-lands seeking to exorcise therewith all foes, present, possible, or suspected. The birdman doesn't mind the racket, for all sounds in nature are good to him, and he would not abate their stirring harshness by one vibration. But with the hunter it is not so. He does not enjoy having his plans published nor his intended victims urged to flee for their lives. Therefore, the noisy bird foretells his own doom, and the end of the Telltale draws nigh. Yet I suppose the last member of this doughty race, starting southward sometime about 1940 from Calgary or Stickeen, will grasp his megaphone firmly and proceed to spread abroad the old, old gospel of alarm. He will sow the air, undaunted, with *tew tew tew*, until some Californian huntsman, arrived with his hammerless, powderless, aimless gun of that day, will drop him kerplunk! into a Sacramento bog. *Sic transibit pestis mundi*—and would, oh would, he might take the Killdeer with him; for be your business fair

Godwits and Surf

From a photograph by the Author

Taken at Santa Barbara

or foul, these two birds will exaggerate its menace or lie most shamelessly.

While no longer common, the impression of abundance still persists by reason of the restless, noisy ways of these Tattlers, so that if there be a single bird about a horse-pond, the whole country-side is likely to know of it. The birds frequent not only tide-flats and salt-water marshes, but duck-ponds, upland-pools, and river-bars as well. Sometimes they move uneasily from one part of the pond to another, as though discontented with the fare offered; and at all times, with reason or without it, they utter their high, querulous notes, *tew tew tew, tew tew tew*,—always in groups of three.

While feeding, the Tattler wades about, knee-deep, snatching its food from the surface of the water, or else thrusting its head below for a quick search along the bottom. Snails and the larvæ of insects are among his usual victims, but the bird is quite smart enough to seize tadpoles or minnows. At such times it may be very alert or quite unwary, according to the amount of persecution it has previously endured. By the side of a farmyard pond I once watched a bird which seemed rather to enjoy company, so long as you didn't actually step on him. With immaculate undergarments rolled tightly above each knee (or *heel*, if you insist on anatomical correctness), he would adventure to wade around you rather than to fly out of your way. At other times, one cannot get within a hundred yards of them.

During the migrations, the Yellowlegs appear singly as often as in small flocks. The fall movement, which sets in by the middle of August, or even earlier, is a little more leisurely than that of spring, inasmuch as the bird's business is less urgent; and because of the year's increase, they are noticeably more numerous in autumn. A few winter with us, but South America is the normal winter home of the species. In far-off Argentina, the birds are said to linger to some slight extent throughout the year, although they do not breed there. In like manner, occasional non-breeding birds have summered in California, but there is no reason to suppose that they ever bred within our borders in historic times, nor, indeed, anywhere short of British Columbia or Washington.

Mr. Samuel N. Rhoads, in 1892, found them nesting about certain inland lakes in British Columbia as far south as Clinton (Lat. 51°). "At this season both sexes stand sentinel on the tops of trees in the vicinity of the nest, rarely alighting on the ground during the presence of an intruder. The newly fledged young often follow the example of their parents in this respect. From this position the male keeps up an incessant clamor throughout the day. One series of notes, uttered only during periods of fancied security, is peculiar and unquestionably a love song."[1]

[1] Proc. Acad. Nat. Sci. Phila., 1893, p. 36.

No. 246

Lesser Yellowlegs

A. O. U. No. 255. **Neoglottis flavipes** (Gmelin).

Synonyms.—Tattler. Lesser Tattler. Common Yellowlegs. Yellowshanks Tattler. Tell-tale.

Description.—An almost exact miniature of the preceding and not requiring separate description; markings of underparts perhaps a little less extensive. Length about 266.7 (10.50); wing 155.2 (6.11); tail 59.9 (2.36); bill 37.1 (1.46); tarsus 50.3 (1.98).

Recognition Marks.—Killdeer size; like preceding species but smaller.

Nesting.—Does not breed in California. *Eggs:* 4; olive-buff (variable as to shade), distinctly (sometimes broadly) spotted or blotched with dark chocolate or blackish brown and violet-gray. Av. size 42.9 x 29.2 (1.69 x 1.15).

General Range.—The Americas, breeding from northern Quebec and southern Saskatchewan to southern Ungava, and northwesterly to extreme Alaska; migrating southward, but chiefly east of the Rocky Mountains, through Middle America to Chile and Patagonia.

Occurrence in California.—Rated by Grinnell as a "rare migrant", with enumeration of records. Of regular occurrence at Santa Barbara during the autumnal movement, but noted in spring only in the season of 1912: Apr. 27, May 1, and May 3.

Authorities.—**Newberry** (*Totanus flavipes*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 98 (Rhett Lake; *Townsend*, Proc. U. S. Nat. Mus., vol. x., 1887, p. 198 (Humboldt Bay); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, p. 56 (distr. and migr.); *Dawson*, Condor, vol. xv., 1913, p. 204, figs. (Santa Barbara, August).

MR. WELLS W. COOKE, who has specialized on the migrations of the Shore-birds, says: "The Yellow-legs is rarely seen west of the Rocky Mountains, but a few occur along the coast from northern Alaska (Grinnell) to southern lower California (Brewster)." California records, at least, are exceedingly scarce. Two occurrences at Santa Barbara are, therefore, important enough to warrant explicit record. On August 30, 1912, I saw five of the Lesser Yellowlegs in company with two of the Greater, and a scattered host of smaller pipers, feeding upon the mud-flats near Colonel Beale's place (the Beale Estero, we sometimes call it). The muck here is foul, not alone with natural accretions but with the rudera of civilization. But bird photographers must not be choosers. I shucked shoes and socks in a trice, seized the Graflex and waded in. Passing automobilists, I fear, were highly amused at the spectacle of this return to nature, but their hilarity gave me no such concern as did the trepidation of the birds.

Left to themselves, the Yellowlegs, being newcomers, would have made very decent subjects, but they received altogether too much advice from wittier birds to achieve photographic fame. The Greater Yellow-

legs was outraged by their reckless conduct and departed early. The Killdeer emptied his basket of falsehoods at their devoted heads and really got the Tattlers into quite a panicky state. The Sandpipers, too, left their credulous majors with disgusted *yips*. Altogether I had a very hard time of it, and succeeded in recording only a few mocking blurs. Two of these birds lingered for two weeks, although the continued influence of evil associates made them photographically impossible.

Taken in Santa Barbara
Photo by the Author

A STUDY IN COMPARATIVE YELLOWLEGOLOGY

BOTH SPECIES, GREATER AND LESSER, WERE SECURED BY ONE LUCKY SHOT

Better fortune awaited on the 16th of August, 1913, when a company of eleven of these Lesser Yellowlegs was found in the Santa Barbara Estero. That was a wonderful day, anyhow, for at the very time the birdman was shuffling about in the ooze, and requesting the Tattlers to "look pleasant please," there were twelve other species of waders within a stone's throw. Their very names (rendered in English) will gladden the heart of the ornithologically elect. They were Wilson Phalarope, Northern Phalarope, Baird Sandpiper, Least Sandpiper, Western Sandpiper, Marbled Godwit, Greater Yellowlegs, Western Solitary Sandpiper, Long-billed Curlew, Killdeer, Semipalmated Plover, and Snowy Plover. The Killdeer, again, was sowing sedition, but his blasphemous counsels were rejected. The Yellowlegs preferred the milder society of the Phalaropes and "Westerns" (*Ereunetes mauri*), and they did not especially object to the company of an ungainly biped who hugged a curious black box.

It is difficult for a novice to decide upon the identity of this bird, as distinguished from *N. melanoleuca*. The presence of one of the Greaters on the same pond is, therefore, of great assistance in clarifying first impressions. On this same day I had the good fortune to glimpse the two species in close company. The tableau lasted but a moment, for upon the instant of discovery I swung upon them with the Graflex, as one would level a gun, and at the report of the shutter they were off like rockets. As they flew, they made outcry in two different keys of Totanine indignation, the notes of these two species being even more distinct as a measure of difference than the relative size of their bodies.

The most prominent characteristic of these Lesser Telltales, as they flutter about from place to place, or rise for extended flight, is the tail appearing almost white—for the cross-barring of the tail-feathers, while apparent enough in the hand, is scarcely noticeable at a distance. Upon alighting, the bird remains a moment with wings held daintily aloft, and if reassured, folds them quietly, one at a time, like a yacht hauling in sail, or simultaneously, as the case may be. On foot it is often restless, bobbing or teetering with nervous apprehension, and serving frequent notice of its readiness for departure. As though conscious, however, of its own preparedness, it will usually suffer a much nearer approach than most other species of waders.

Taken in Santa Barbara *Photo by the Author*

"THE YELLOWLEGS PREFERRED THE MILDER SOCIETY OF THE PHALAROPES AND WESTERNS"

THE YELLOWLEGS IS THE LARGEST OF THE TRIO

No. 247

Western Solitary Sandpiper

A. O. U. No. 256. **Tringa solitaria cinnamomea** (Brewster).

Description.—*Adult in summer:* Above olive-brown, or fuscous with a faint greenish tinge, blackening on wings; the head and neck finely streaked, and the back, etc., distinctly speckled with whitish or buffy; upper tail-coverts dusky, the lateral feathers spotted or barred with white; central tail-feathers dusky, spotted on edges with white; the remaining feathers of tail white with heavy dusky bars; underparts white, the sides of neck and breast and across chest streaked with fuscous; the sides, axillars, and lining of wings white, barred with dusky. Bill blackish; feet and legs dull greenish black. *Winter plumage:* Colors more blended; olivaceous tinge of upperparts nearly wanting; whitish spotting less pure; head and neck less distinctly streaked

Taken in Santa Barbara *Photo by the Author*

A GLIMPSE OF A SOLITARY SANDPIPER
THE SMALLER BIRD IS A BAIRD SANDPIPER

with light grayish brown. *Immature:* Like adult in winter, but colors still more blended, the spotting of the back pale cinnamon instead of white; no streakings on head and neck. Length 190.5-215.9 (7.50-8.50); wing 137.6 (5.42); tail 57 (2.24); bill 31.1 (1.22); tarsus 33.4 (1.315).

Recognition Marks.—Towhee size; olive-brown with white speckling. To be carefully distinguished from *Actitis macularia* by its somewhat larger size and slimmer build, as well as by the absence of spotting on the belly. *Weet, weet* note a little sharper than that of *A. macularia.*

Nesting.—Not yet distinguished from that of *T. s. solitaria.*—(Does not breed in California). *Eggs:* 4; pointed ovate; white with a pinkish, bluish, or greenish tinge, sharply and rather finely but sparingly spotted with chocolate and deep vinaceous gray; deposited in old nest of Robin, Grackle, or other species, in sapling or tree. Av. of 8 eggs in M. C. O. coll.: 35.05 x 24.9 (1.38 x .98); index 71. *Season:* c. June 1st; one brood.

Range of *Tringa solitaria.*—The Americas, breeding in cold, temperate, and sub-Arctic regions of North America; migrating through the West Indies and Middle America to Argentina and Peru.

Range of *T. s. cinnamomea.*—Imperfectly distinguished from that of *T. s. solitaria,* but probably comprises all breeding territory west of Longitude 110 West, and in general the Pacific section of the Americas. Breeds, thus, from northern Alberta (where alone authentic nests with eggs of any form of *solitaria* have been taken) to northwestern Alaska, and winters south to Peru.

Occurrence in California.—Not common migrant, but appears both coastwise and throughout the interior, chiefly in early autumn.

Authorities.—Cassin (*Rhyacophilus solitarius*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 733 (Fort Tejon); *Willett,* Pac. Coast Avifauna, no. 7, 1912, p. 38 (occurrence in s. Calif.); *Howell,* Pac. Coast Avifauna, no. 12, 1917, p. 47 (s. Calif. ids.).

"SOLITARY" must not be understood in too absolute a sense. It is not because of excessive fear nor hauteur that birds of this species are seldom seen with others of the Sandpiper kind; but only because they have marked preference for certain kinds of cover. In this, as in other respects, the Solitary Sandpiper is most nearly comparable to the Spotted Sandpiper, and these superficial resemblances between the two species are so close that the question of any distinction at all is rarely raised in the popular mind. But *T. solitaria* is really larger, slimmer and jauntier (if possible), with a voice a little higher-pitched and thinner. With the Spotted, it appears by the side of streams and on river bars, but it does not follow its lesser kinsman to the sea-shore in winter; and it is much more likely to seek out for itself sheltered pools and grassy plashes, which the other Sandpipers ignore. Even on the lagoons, which all must visit during the migrations, the Solitary keeps to the edge of the salicornia, and flits rather than endure exposure in the open.

"If one happens upon half a dozen of these birds feeding beside a leaf-lined pool in the depths of the woods, he may see not only a beautiful sight, but one out of the ordinary in Sandpiper experiences. The birds dart about rapidly, capturing not only slugs, worms, and small crustaceans, but insects as well. Indeed, the wings at times are carried about half-raised, as though the bird were on the very point of flight; and quick sallies are made at passing moths and beetles. If a decaying log lies half submerged, it is sure to be inspected from every point of vantage; and the bird is not averse to alighting, on occasion, upon the limb of a convenient tree. Again the bird plashes about freely upon the floating vegetation, or wades breast deep, taking care, however, that its dainty white bodice shall not be soiled. At other times, perhaps, it moves with the sedateness of a heron, putting each foot down carefully so as not to roil the water" (The Birds of Ohio).

In securing what proved to be very indifferent portraits (not shown), I pressed the bird along the muddy margin of Hope Lake toward a *cul de sac* of tules, where, as I knew, a Sora Rail was wont to lurk. The Sandpiper was cornered against the wall of reeds, and was meditating its danger. It was the psychological moment for a scare. Sure enough, the Sora burst suddenly from cover and made a dramatic rush at the invader. The Piper stood his ground upon the instant, and glared back so haughtily at the Rail that that worthy fowl, blushing, as we may believe, under the roots of his brown feathers, stammered an apology and fled incontinently to his tall timber.

Of the nesting of this wary bird we may not speak in detail, save to remark that, after many alarms and false notices of discovery, it (or at least the typical form) has positively been found nesting in the Province

of Alberta. It seems that, after the well established fashion of its kinsman, the Green Sandpiper (*Helodromas ochropus*) of Europe, our Solitary Sandpiper deposits its eggs in the deserted nests of Passerine birds, such as Robins, Kingbirds, Jays, Grackles, and the like. Since the original discovery of Mr. Evan Thompson on June 16th, 1903, many sets have come to light, and the observation is fully confirmed.

No. 248

Western Willet

A. O. U. No. 258a. **Catoptrophorus semipalmatus inornatus** (Brewster).

Synonyms.—Semipalmated Tattler. Stone Curlew.

Description.—*Adult in summer:* Above brownish gray (hair-brown), heavily marked with blackish and ochraceous buff, the black heaviest and streaky on crown, patchy and terminal on back, central and herring-bone-patterned on scapulars, etc.; the buffy occupying major indentations; greater wing-coverts and secondaries chiefly white, lightly freckled or mottled with dusky; the primaries white basally and black-tipped; upper tail-coverts pale buffy, very lightly barred or mottled with dusky; the tail light hair-brown or dusky-ochraceous, freckled with dusky; underparts palest ochraceous buffy, immaculate on belly, overlaid by light cinnamon on lower neck, breast, sides, and crissum; the throat sparsely dusky-spotted, the lower neck heavily dusky-streaked, the breast and sides heavily dusky-wavy-barred, the sides and under tail-coverts both barred and mottled with dusky; lining of wings brownish black, narrowly tipped with white; the axillars solid black. Bill dusky; feet and legs dark bluish. *Adult in winter:* Above nearly uniform blended ashy gray (snipe-gray); the sides of head, neck, and breast, and the sides heavily washed with the same color, and a lighter tinge across the chest; remaining underparts and the upper tail-coverts white or palest buffy. *Immature:* Like adult in winter, but feathers of back edged with pale ochraceous; the tail dusky-and-white barred; below tinged or faintly mottled with brownish gray on neck, chest, and sides; otherwise unmarked. Length about 406.4 (16.00); wing 221 (8.70); tail 83.8 (3.30); bill 62.2 (2.45); tarsus 67.3 (2.65).

Recognition Marks.—Crow or Curlew size; extensive white on wing (black-and-white) with large size distinctive; feet partially webbed.

Nesting.—*Nest:* On the ground or in grass tussock, of grass and weed-stalks. *Eggs:* 4; greenish white to dark olive-buff or buffy brown, spotted boldly with various shades of umber brown, and with obscure violaceous shell-markings. Av. size 53.3 x 39.4 (2.10 x 1.55). *Season:* May–June; one brood.

Range of *Catoptrophorus semipalmatus.*—Temperate North America; south in winter to Brazil and Peru.

Range of *C. s. inornatus.*—Western United States and adjoining Canadian Provinces. Breeds in suitable localities from about Latitude 56 in Alberta and Saskatchewan south to northern California, Texas, and Louisiana; and from eastern Oregon to western Minnesota and northern Iowa. Winters from the Gulf States and California (sparingly) through Central America to western Ecuador, the Galapagos Islands, and Peru.

The Western Willet

Distribution in California.—Fairly common migrant both coastwise and interiorly. Sparingly resident in summer, chiefly in the northeastern plateau district, and in winter, especially in the San Diegan district. Stragglers appear along the coast throughout the year.

Authorities.—Gambel (*Symphemia semipalmata*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 223 (Calif.); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 9 (migr. dates at Santa Barbara); *Van Denburgh*, Condor, vol. xxi., 1919, p. 39 (Lassen Co., breeding; desc. habits, nest and eggs).

A HALF CENTURY of gunfire, although moderated of late, has made the Willet a suspicious and a wary bird. Seen in company with Godwits and Jack Curlews on some lonesome stretch of sea beach, it is usually the Willet who gives the first alarm. It is by this, in part, that one may recognize him, for to eyes and *at rest* he is a bit of a nondescript,—a dull, gray bird, only slightly smaller than Curlew or Godwit, and with a straightened beak, not quite so long. The sight is likely to be a rare one, and as the bird edges away murmuring nondescript warnings to his mismated fellows, the student reviews hastily his own repertory of Shore-birds—Tattler, Plover, Curlew, Knot, or what-not. But when the nondescript takes sudden wing, the secret is out. Only the Willet boasts that striking black-and-white wing pattern, which has been so cleverly concealed under a thatch of gray, for it is only the distal and under portions of the wing which are involved. There is an outburst, also, of discordant melody, for other birds from further down the line, unnoticed before, join this bolting delegate and fill the air with fretful cries, *craac'kuh* or *chêrah*. Given as the ordinary call note, or note of apprisal, it sounds to me like *kleerk*, and is repeated rapidly in threes during flight. It must be this note which successive observers have obediently reported as "*pill will willet*." There is no accounting for tastes—or ears; but I have besought these passing birds a hundred times to say *willet*, just once, in order to justify this hoary tradition; but they have refused.

Upon alighting, at a good distance, the Willets first haul in sail, namely, fold their wings with that momentary deliberation which is so dear to the lovers of shore-bird life, and then they babble notes of congratulation and reassurance—*kō leek* and *kay ak* and *ko*. Willets frequent the beaches at certain turns of the tide, but they glean most of their living on the mud flats, probing in the soft ooze of salty or brackish lagoons. At such times they are very sociable and if no birds of their own sort offer, they will take up with Helvetian Plovers or Long-billed Dowitchers, Peeps even. I secured the portrait shown on page 1274 on the 12th of August, 1913. The occasion was a challenge, for I knew the amenability of Dowitchers, so I promptly shucked off shoes and socks and waded in. Thanks to the Dowitchers, who had no notion of deserting

their divinity, and who by their very devotion lulled the fears of that sleepy genius, I got quite decently near, say, within thirty feet of my objective. The fog just then was rolling in intermittently off the ocean, although it was high noon, and at times birds and photographer nearly lost sight of each other. By dint of sacrificing a pair of trousers, the photographer managed to keep low on the local horizon, and although the Willet showed some concern, he was *so-o-o sleepy* that he deliberately took chances and napped—under fire, as it were. The shutter, however, got upon the bird's nerves, and by the time of the third offense he edged away in good earnest.

Taken in Modoc County Photo by the Author

A WESTERN WILLET ON GUARD

Western Willets are of common occurrence during migrations along the coastal marshes of California, and they winter sparingly from Santa Barbara, or even Eureka, southward. At this season they consume worms, "sand fleas" and other crustaceans, and the smaller varieties of shell fish. Bradford Torrey reports having seen thousands together in False Bay, and that as recently as 1910; but the ranks of the Willet have been sadly depleted by gun fire and by reduction of breeding areas, so that small flocks, not over a dozen or so, and scattering individuals, are much more common.

For the nesting season the Western Willets retire to the more secluded swamps of the interior. So far as reported, they nest nowadays only in Plumas, Modoc, and Lassen counties. I found them nesting very quietly in the swamps bordering Goose Lake in the summer of 1912. Like the Jack-snipe of the same section, the Willets mounted guard on fence-posts and observed the nester's operations with wary dignity. I was unsuccessful in the quest, owing chiefly to disturbed weather conditions that year. But Dr. Van Denburgh, more fortunate, has left us a recent account[1] of a colony found breeding at Grasshopper Meadow, near Eagle Lake, in Lassen County. Here, about July 1st, upon extensive mud-flats surrounding a shallow lake, the "Academy" party found a dozen or fifteen pairs of Western Willets, and succeeded in locating five nests. The attendant birds charged and circled about the visitors, something after the fashion of Avocets; and their nests, in much the same fashion, consisted of weed-fragments carelessly built up on the mud.

[1] The Condor, Vol. XXI., Jan. 1919, p. 37.

It is easy to picture a time when Willets were ten times more common than they are at present; and if only men will content themselves with honest beef and mutton, instead of hankering after strange and doubtful dainties, we may live to see such a time again.

Taken in Santa Barbara *Photo by the Author*

A CAT-NAP

No. 249

Wandering Tattler

A. O. U. No. 259. **Heteroscelus incanus** (Gmelin).

Description.—*Adult in summer:* Above uniform brownish slate (chætura drab); a white superciliary, broken behind; shaft of first primary chiefly white; underparts white as to ground, everywhere marked with color of back (chætura drab to hair-brown), most lightly on throat and crissum, in heavy streaks on fore-neck, in wavy bars on breast, sides, and flanks; axillaries and part of wing-lining pure drab. Bill greenish dusky; feet yellowish dusky. *Adult in winter:* Similar, but nowhere barred save on under tail-coverts and lining of wings; throat and belly white, the drab of remaining underparts confluent as solid shading. *Immature:* Like adult in winter, but scapulars, tertials, and upper tail-coverts, indistinctly spotted with white, and sides faintly mottled with white. Length about 279.4 (11.00); wing 176.7 (6.95); tail 76.2 (3.00); bill 39.4 (1.55); tarsus 33 (1.30).

Recognition Marks.—Killdeer size; uniform dark coloration distinctive; *tew tew* notes; frequents rocky shores.

Nest and Eggs unknown.

A Wandering Tattler

From a photograph by W. Leon Dawson
Taken on the Farallon Islands

General Range.—Breeds from south-central Alaska to the Macmillan River in Yukon, and south along rocky coasts, probably to Washington. Winters throughout Oceanica and on islands along the Pacific Coast of America from southern California to the Galapagos.

Distribution in California.—Common spring and fall migrant touching upon exposed and rocky portions of the coast and the islands. Sparingly resident in winter upon the Santa Barbara Islands. Malingerers, presumably non-breeders, occur throughout the summer.

Authorities.—**Cooper** (*Heteroscelus brevipes*), Am. Nat., vol. iv., 1871, p. 758 (Monterey); *Henshaw*, Geog. Surv. W. 100th Merid., 1876, p. 272 (Santa Cruz Id., habits, actions); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 48 (s. Calif. ids.); *Grinnell, Bryant, and Storer*, Game Birds Calif., 1918, p. 422 (desc., occurrence, habits, etc.).

WANDERING TATTLERS

TO CHRISTEN a bird "wandering" is to make all birdmen godfathers in interest; for what about any bird more captivates the imagination than its disposition, and ability, to wander? This Tattler should be the patron saint and emblem of all who love the wild, and especially of those who, having once been upon the bosom of the broad Pacific, feel evermore the ebb and flow of salt water in their veins. Attu, Shamshu, Baranoff, Laysan, Marcus Island, Odgovigamut—these are all the same to *H. incanus*. His grip is always packed and his ticket always purchased for whatever clime, rock, or strand he takes a fancy to. Nor need he

travel *all* alone. "What say, dear, shall it be the Shumagins this summer? or a little cabin on the Tschuktschi?" There is a proposal *a la mode* for you, and the heart grows faint with desire to follow.

The Wandering Tattler is known to summer in Alaska, and is supposed to breed in the vicinity of interior lakes and streams, but its nest has not yet been taken.

Returning south to winter along our coasts, the bird reaches us sometimes by the 20th of July; while the spring migrations are more or less obscured by the fact that non-breeding birds linger irregularly throughout the summer. Wherever it ranges, the Wandering Tattler haunts the barnacle-covered rocks and tide-swept reefs of the wilder shores, and itself appears but a detached fragment of this somber substance. When frightened, the bird flushes with a quavering cry, somewhat like the *tew tew tew* of the Greater Yellowlegs (*Neoglottis melanoleuca*), but more subdued; and when it alights, it sits for some time motionless in a plover-like attitude, with its long bill held horizontally, invisible in the dull light of a foggy day, unless, perchance, outlined against the surf. At other times the bird will betray its uneasiness by a rapid jetting motion of the tail. The surf has absolutely no terrors for this intrepid bird. I have seen a sudden wave snatch him off his feet and bury him in an awful smother of foam; yet when the dazzling whiteness dissolved enough for vision, the bird was disclosed, looking dry and saucy, on a rock a dozen feet away. How he managed it I do not know, for that comber would have smashed a dory to splinters.

Those who have been fortunate enough to visit the Farallon Islands in May count the Wandering Tattler one of the most prized members of their avian pageant, and the one best fitted to symbolize the wild isolation of the group. Here their daylight hours are spent religiously upon the eternal bug-hunt, but as night approaches the birds come well ashore and crouch like devotees behind such boulders as will shield them from the merciless wind.

For the most part the Wandering Tattler, like Kipling's cat, prefers to walk by himself. Kindred tasks, however, sometimes throw him into the very tolerable company of Black Turnstones; and Spotted Sandpipers are sometimes treated like younger brothers who need a little looking after. On Santa Cruz Island the winter shore-line appears to be portioned out roughly among such curiously assorted pairs, and one expects to see a Piper and a Tattler, rather than a pair of either, on a given headland.

No. 250

Bartramian Sandpiper

A. O. U. No. 261. **Bartramia longicauda** (Bechstein).

Synonyms.—"The Bartramian." Upland Plover. Field Plover.

Description.—*Adult:* Above, varied brown or dusky with a slight olive tinge, the feathers edged with ochraceous-buff, and on the back, etc., spotted and barred with black; top of head blackish, parted by indistinct buffy median line; hind-neck buffy or ochraceous, streaked with dusky; primaries dusky, the outer one with a white shaft, and white strongly barred with dusky on the inner web; tail irregularly barred with black, the central feather olive-dusky, the outer ones ochraceous and gray; underparts whitish or with buffy tinge on breast, sides, and crissum; the fore-neck sharply streaked with brownish dusky; the markings U- or V-shaped on breast and opening out into bars on the sides; axillars and lining of wings finely barred dusky and white. Bill yellow, blackening on ridge and tip; feet and legs dull yellow. *Immature:* Similar to adult, but buffy and ochraceous stronger, and dusky markings of underparts less distinct. Length 285.8-323.9 (11.25-12.75); wing 162.6 (6.40); tail 71.6 (2.82); bill 30.5 (1.20); tarsus 45.2 (1.78).

Recognition Marks.—Killdeer size or larger; bill somewhat shorter than head; finely streaked and mottled coloration, ochraceous and dusky. A bird of upland and prairie. Notes, a quavering alarm cry, and a mellow whistle long-drawn-out.

Nesting.—Not known to breed in California. *Nest:* On the ground, a grass-lined hollow. *Eggs:* 4; ovate, pale olive-buff, tilleul buff, ivory yellow, or pale clay-color, spotted sharply and rather sparingly with deep reddish brown, umber, chocolate, and violet-gray. Av. of 23 eggs in the M. C. O. coll.: 43.7 x 32 (1.72 x 1.26); index 73.2. *Season:* June; one brood.

General Range.—North and South America. Breeds in the northern United States from northern Virginia, southern Indiana, southern Missouri, southern Oklahoma, northeastern Utah, and (an isolated colony?) southern Oregon, north to southern Maine, southern Quebec, southern Michigan, Manitoba, southern Mackenzie, and northwestern Alaska (E. K. Townsend). Migrates through Middle America and the West Indies to Argentina and Chile.

Occurrence in California.—Casual migrant, one record, Aug. 8, 1896, by Vernon Bailey.

Authorities.—**Cooke** (*Bartramia longicauda*), U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 65 (Tule Lake, Aug. 8, 1876, 1 spec.).

THE UPLAND PLOVER is not rated as common anywhere west of the Rocky Mountains—though there is some evidence that the bird is gradually extending its range into the inviting agricultural areas of Idaho and Oregon. The bird loves meadows and upland pastures quite as well as it does its native prairie unadorned, and if only our frail race knew how to resist the temptations afforded by such an easy mark, this handsome Plover might eventually gladden our Western farm life.

Like a benediction from heaven comes that stirring, rolling, long-

drawn whistle with which the bird greets from on high the sight of its remembered pastures in springtime. Hearing it, the farmer boy straightens at his task and remembers that he, too, though born of the soil, was born to lofty things. Clods find their voices in skylarks, and a wisp of prairie grass, dry and sere, has taken fire aloft in the Bartramian's song.

One appearance, deemed accidental, entitles this bird to recognition here; but if it does succeed in making headway in the West, one feels safe in predicting that it will first establish itself in the Surprise Valley, in Modoc County, where the Bobolink, most jubilant of songsters, has already found asylum, and where the Long-billed Curlew still lingers unrebuked. The bird is part sandpiper, part plover, to appearance, and its short bill will serve instantly to distinguish it from the well-known Sickle-bill (*Numenius americanus*), which it otherwise resembles in choice of range and in general economy.

No. 251

Spotted Sandpiper

A. O. U. No. 263. **Actitis macularia** (Linnæus).

Synonyms.—Peet-weet. Tip-up. Teeter-tail.

Description.—*Adult in summer:* Upperparts light olive-brown with pale greenish or brassy luster; the head and neck streaked, and the back, scapulars, tertiaries, etc., irregularly barred with darker; quills darker and with more distinct greenish reflections; the inner primaries and secondaries narrowly tipped with white, the former varied with some white on the inner webs, the latter with much basal white, showing conspicuously in flight; central tail-feathers like back, but greener, the outer feathers becoming duller and tipped with white; a white superciliary line; entire underparts white and strikingly marked with rounded spots approaching color of back; axillars pure white. Bill flesh-color, sometimes orange, darkening above, or not, and with dusky tip; feet and legs pinkish white. *Winter plumage:* Somewhat similar, but underparts immaculate; breast tinged with gray; back browner, unbarred. *Immature:* Like adult in winter; but showing blackish-and-buffy bars above, faintly on back, more strongly on wing-coverts and upper tail-coverts. Length 177.8-203.2 (7.00-8.00); wing 105.4 (4.15); tail 50.8 (2.00); bill 23.6 (.93); tarsus 24.1 (.95).

Recognition Marks.—Sparrow to towhee size; greenish brown back; boldly spotted underparts; the characteristic bird of river-bank and lake-shore.

Nesting.—*Nest:* On the ground, a slight depression, scantily or somewhat carefully lined with dead leaves and grass. *Eggs:* 4; ovate or pointed ovate; pale olive-buff, pinkish buff or light clay-color, boldly and coarsely spotted or else blotched and finely spotted with deep chocolate and a little violet-gray. Av. of 10 sets in M. C. O. coll.: 31.75 x 23.4 (1.25 x .92); index 73.6. *Season:* May–July; one or two broods.

General Range.—North and South America. Breeds practically throughout the United States, except the southeastern portion, north to the limit of trees. Winters

Taken in Siskiyou County *Photo by the Author*

LAKE ELAINE: A NESTING HAUNT OF THE SPOTTED SANDPIPER
MT. SHASTA IN THE DISTANCE

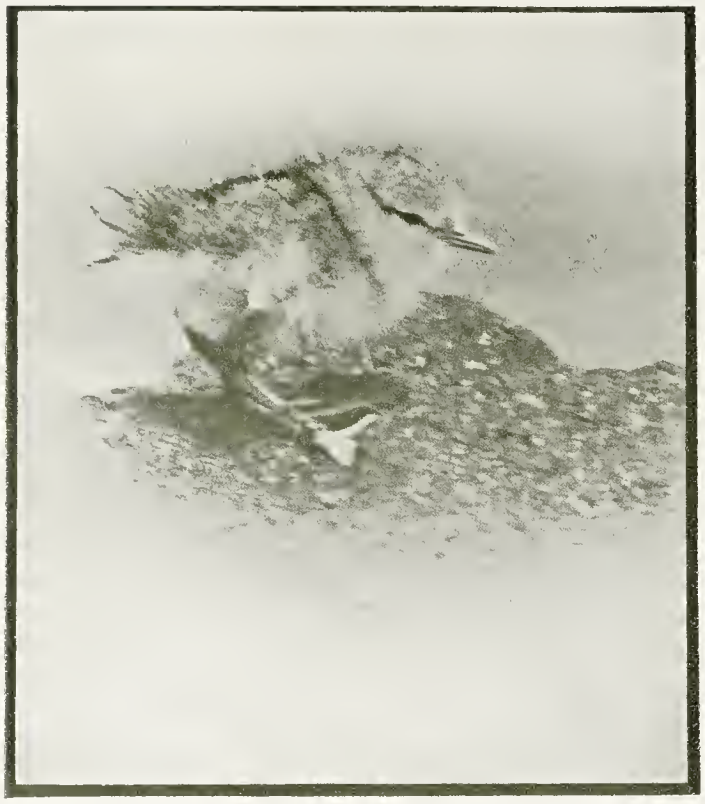
from southern California, Texas, and South Carolina, south to Brazil, Bolivia, and Peru.

Distribution in California.—Common migrant. Resident in summer along larger streams and upon lakes of the Sierra Nevada system, at least as far south as the Cottonwood Lakes (alt. 11,000) ("Spring" arrival, July 14, 1911), and irregularly along major streams of the coastal system south to Ventura County. Sparingly resident in winter upon the coasts and islands of the San Diegan district and in the valley of the lower Colorado River.

Authorities.—Cassin (*Tringoides macularius*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 735 (Ft. Tejon; Sacramento Valley; *Dwight*, Auk, vol. xvii., 1900, p. 372 (molt); *van Rossem*, Condor, vol. xxii., 1920, p. 39 (Kern Lake, Tulare Co., breeding).

THE TEMPTATION to try out nicknames on this, the best distributed and possibly the most familiar American Shore-bird, is almost irresistible. If I were given first choice, I would choose Bird-in-love-with-his-shadow—even though that be an augmented instead of a "nicked" name. Like a second Narcissus, this familiar little Sandpiper loves to linger at the water's edge; and even if it be conceded that he has other

business there besides looking in the mirror, we could not suppose that he is altogether insensible to the flattery of the smooth-flowing stream. It is for this reason, perhaps, that he prefers the vicinity of quiet inland or upland waters; and it is this also—what else?—that tempts him to make from time to time little horizontal excursions, or loops, of flight out over the river or placid lake. If frightened, as by a boatman, the bird may patter along the muddy brim, or remove by short flights, but sooner or later he puts off from shore, edges out over the water, wheels about in a great circle, and draws near his starting point again, in a graceful curve which regards the shore as a sort of asymtote—this on wings held stiffly, or quivering with emotion.



Taken in Modoc County *Photo by the Author*

BABY ALL ALONE

Peet-weet would be a second choice for a name, even though these petty syllables quite fail to express the emotional, vibrant qualities of the bird's cries, or the ringing clearness with which they resound from shore to shore. *Peeet weet, weet, weet, weet!* What "naturalized" Californian has not heard that endearing sound coming most unexpectedly from a river-bar in some wild canyon of the Sierras, or from the edge of some emerald lake nestling in the embrace of snow-banks? What! our little Peet-weet up here? How different these from the sluggish waters of the Piscataqua, or the prosaic shores of Bullhead Lake. Yet the voice is the same,—amiable, alert, sweetly piercing, authentic. It is the same bird, too, a fellow Easterner quite at home in this giddy, awful West. "Tip-up," or Teeter-tail, comes next, and the California bird is as little restrained in his actions by the presence of frowning Sierras as he was by the laughing birches of Vermont. Here, too, he has the never-ending habit of teetering: "The fore part of the body is lowered a little, the head drawn in, the legs slightly bent, while the hinder parts and tail are alternately hoisted with a peculiar jerk, and drawn down again with the regularity of clock work." This strange motion, which has won for the bird its most familiar trivial name, gives it also an air of mock solemnity,

which is only heightened by the Quaker drab adornment of the upperparts and the apparently serious view of life which the owner takes. Absurd as the action is in adults, it tests the risibles still more sorely when a toddling youngster, bristling with pin-feathers, discovers the same uncontrollable ambition in his rear parts, and says How-do-you-do backward, with imperturbable gravity.

Solitary Sandpiper would be a name most fitting, were it not already appropriated by *Tringa solitaria;* for of all Shore-birds the Peet-weet is least sociable *inter se.* Family parties, to be sure, hold together until the young are ready to fly. Indeed, I am not sure but that family ties here are the strongest of all—while they last. Your solitary heart loves deepest, and yearns for its own with the most abiding tenderness, even when its way lies apart. But a Peet-weet loves solitude, and the only grown person he will allow around is his mate, and here only so long as family responsibilities require. Each pair occupies a circumscribed stretch of territory, and will suffer invasion up to a certain boundary mark; but just as surely, each pair is happiest when it has a little lakelet or a mountain meadow all to itself. And, lastly, the name "Spotted" is a misnomer, applicable only for a certain portion of the year,—April to September, namely. In the winter season his breast is as guiltless of spots as Sir Gallahad's scutcheon. At this season also, when he frequents, or rather *un*frequents, our southern coast, love of solitude has become for him a madness. Although the bird is scarcely molested under pretense of its being game, we would think from the way it dodges a gun—even one held in the hand of an honest scientist—that the Spotted Sandpiper regarded himself as a very Curlew Sandpiper for rarity, or else that he was a train robber with a price upon his head. I have played peekaboo with these gentry for an entire afternoon, and then secured a specimen only under cover of darkness. These astute pipers frequent the wildest rocky points of our southern coasts and islands, and they brave the buffet of the surf as surely as *Aphriza* or *Heteroscelus* (who knows, by the way, but that these vaunted heroes of the surf are nothing better than brookside loafers at home?) When surprised—and he always gets up first—*Actitis* hustles out over the water as though he were heading for Patagonia. If you keep on your way, the chances are that the bird will describe a huge semilune, then hit a spot downshore on your own back track. Or, if you stand your ground, the brave piper is quite capable of sustained and leisurely flight over the water, where he skims close to the surface and follows the swell and fall of every wave, in the effort to tire you out, so that he may return to the identical spot he left.

No. 252

Long-billed Curlew

A. O. U. No. 264. **Numenius americanus** Bechstein.

Synonyms.—SICKLE-BILL. HEN CURLEW.

Description.—*Adult:* General color ochraceous-buff (tilleul buff) to pale cinnamon-rufous (vinaceous buff or avellaneous); upperparts varied with dusky—in broad streaks on crown, in narrow streaks on sides of head and neck, in heavy central "herring-bone" connected bars on back and tertials, and so variously mottled throughout, only the outer webs of outer primaries being of solid color,—dusky; below sharply streaked on breast and sides, sometimes sparingly barred, with blackish, the ground-color reaching its greatest purity and intensity on axillars. Bill very long, considerably decurved toward tip; the culmen brownish dusky, the lower mandible yellow at base and darkening toward tip; feet and legs stout, dark; claws short and broad. Length 508-660.4 (20.00-26.00); wing 300 (11.80); tail 120 (4.72); bill up to 215.9 (8.50). Av. about 165.1 (6.50); tarsus 88 (3.46).

Recognition Marks.—About crow size—making some allowance for bill; pale cinnamon coloration; long decurved bill distinctive; quavering cry.

Nesting.—*Nest:* A rather deep grass-lined depression on ground. *Eggs:* 4; ovate, not sharply pointed, olive-buff, deep olive-buff, pale dull clay-color, or dull gray-green (vetiver green), spotted or sometimes blotched with sepia and deep brownish olive, or with under-shell markings of deep olive, citrine drab, grape-green and grayish olive. Av. size 65.5 x 46.5 (2.58 x 1.83); index 71. *Season:* April 15–May 15; one brood.

General Range.—North America. Formerly bred practically throughout the United States, including Florida. Range now restricted to western Canadian Provinces (central Saskatchewan to south-central British Columbia), the states west of the Mississippi River and the Gulf States; now breeding south to northeastern California, northern New Mexico, and northwestern Texas. Winters from California and the South Atlantic and Gulf States south to the West Indies and Guatemala.

Distribution in California.—Fairly common migrant east and west of the Sierras. Breeds in the northeastern plateau counties. Winters sparingly in the San Diegan district, in the central valleys, and near San Francisco. Not reported from the islands.

Authorities.—Gambel (*Numenius longirostris*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 223 (Calif.); *Feilner*, Ann. Rep. Smithson. Inst. for 1864 (1865), pp. 423, 428 (Butte Valley, Plumas Co., desc. nest, eggs, habits); *Shufeldt*, Jour. Anat. and Physiol., vol. xix., 1884, p. 51, pls. (osteology); *Grinnell*, Condor, vol. xxiii., 1921, p. 21 (syst., crit.).

THE LONG-BILLED CURLEW, or Sickle-bill, is by reason of being a little the largest, justly accounted the dean of the American Shore-birds. Indeed, it shares with the common Curlew of Europe, *Numenius arcuatus*, the honor of being the largest of the world's *Limicolæ*. Formerly abundant throughout the West, and especially in California, the species is known now as a sparing winter resident along our northern

coast and in some of our interior valleys. A diminishing few remain to breed in the plateau counties of the extreme northeast, but there appears to be only one authentic record of eggs taken within the limits of the State.

Those that winter with us upon the beaches associate more or less with "Jacks," *Phæopus hudsonicus*, and Marbled Godwits. From the latter they may, of course, be readily distinguished by their longer, decurved beaks; and from the former not alone by the bill, but by a different way of carrying it. The Long-bill, having an easier reach, does not stoop so abjectly in gleaning sand-fleas; and at rest he stands habitually more upright, with head thrown further back, a position necessitated by the increased weight of the bill. The Long-bills have much the same habits as the Jacks, feeding and resting upon the upper beach, and running down to the water's edge when frightened.

Now that the persecution of gun-fire is measurably reduced, owing to federal enactment, our Shore-birds would get on well enough with us humans, if only we would play fair. But what elemental savage, however well dressed, can abide the presence of possible meat stalking in wary dignity before his face and eyes? "Sniping" still goes on remorselessly; and if guns are not at hand, stones suffice to keep the birds in an agitated condition. Saddest of all is the relentless usurpation of the shore-line. We must, forsooth, see every wave there is to see, either from the depths of our whirring limousines or from improvised lunching stations. The result is that there is scarcely a square yard from Point Conception to San Diego that a bird dare call its own, or upon which it is free from noise, fright, or stealthy attack. Yet in this thoughtless usurpation we

Taken near Santa Barbara
Photo by the Author

A GROUP OF LONG-BILLED CURLEWS
ALSO CONTAINS TWO MARBLED GODWITS

are wasting our own heritage and fouling our own fountains of interest; robbing ourselves of joy in life, as well as driving the birds out to a shoreless sea, and sunset.

Those which have successfully wintered somewhere in the South return to their interior breeding grounds along about the first of April. At this season the Curlews move in large flocks, sometimes to the number of a hundred or more, in continually shifting lines and Λ-shaped figures—like the geese, in that some experienced leader maintains a position at the front. Although wary and difficult of approach, save at the nesting season, clumsy efforts at imitation of their quavering call will serve to bring the birds up eagerly. Once within range, the Curlews are so overcome with solicitude for their fallen comrades that they are exposed to repeated attack until the hunter is satisfied. The "wagon-loads" reported from the Columbia River Valley in an earlier day were, unfortunately, no exaggeration, and the ranchers of the central West, who still occasionally see a Curlew, may not realize how fearfully their ranks have been depleted.

Save in the fall of the year when the birds are fat, the flesh is tough and dry, and in many cases positively unpleasant. But if it tasted like twisted artemisia fibers, frail human nature could hardly endure to see so large a bird and such an "easy" mark flourish unmolested. Kill it, by all means, and thus fulfil the destiny of budding manhood! The best opportunity is afforded when the bird alights and pauses for a moment with uplifted wings, a yacht of the desert come to anchor at the ancestral roadstead.

During the nesting season, the Sickle-bill throws caution to the winds, and hurries forward to meet a prospective intruder with protesting shrieks. If the newcomer be really curious as to the whereabouts of the nest, both birds will circle and flap and hover and vociferate until one might think that Bedlam had broken loose. The extraordinary bill of this bird, sometimes eight or even nine inches in length, serves admirably as a pair of chop-sticks, and will pick up a weevil as deftly as a Chinese a grain of rice; but as a vehicle of emotion the vibrating mandibles are deliciously absurd. *Kerer er-er uk, ker er-er-er-uk* comes torrentially and unceasingly from the anxious throats until one feels forced to join in the excitement, hysterically. Shoo! you yawping termigants, you!

The nest is a mere grass-lined depression in the ground of pasture or hillside, and may or may not have convenient access to brook or lake or swamp. The eggs, normally four in number, may be found by the 20th or even the 15th of April. They are the size of large hens' eggs, pale buffy-brown or clay-colored, variously spotted and blotched with a rich dark brown, and sometimes exhibiting traces of violet outcropping from the deeper strata of the shell. Only one brood is raised in a season.

In July, 1912, I found these Curlews breeding near Eagleville in the Surprise Valley. It was, of course, way past hatching time, but the birds were warily anxious for their young, and in the flooded meadows adjoining Lower Lake one might see six or eight birds in the air at a time, some quavering and some whistling. The normal notes, unlike the harsh expletives of near contact, are musical and weirdly beautiful, authentic supertonic of the wild, which we can ill spare from our blighting and decorous civilization. It is high time to retire this quaint and interesting fellow from the list of putative "game birds" and to afford him absolute protection. The struggle for existence will be hard enough for him at best under the new conditions, without our compassing his absolute destruction merely that a few more light-hearted pots may boil. Curlews are still common in a few spots where they have been wont to assemble for migrations, but their total numbers have certainly been reduced to less than one-tenth, probably nearer one-twentieth, of their former proportions. What will be the use of life after the living are gone?

No. 253

Hudsonian Curlew

A. O. U. No. 265. **Phæopus hudsonicus** (Latham).

Synonyms.—Jack Curlew. "Jack." American Whimbrel.

Description.—*Adult:* Above blackish brown or dusky, spotted, streaked, and barred with ochraceous buff; crown nearly uniform blackish with broken median stripe of buffy; primary coverts and exposed webs of outer primaries black, the shaft of the first primary white, the inner webs of the outer primaries and both webs of the inner primaries and the secondaries deeply indented with ochraceous; upper tail-coverts and tail barred with blackish and gray-ochraceous; underparts ochraceous-buff (tilleul buff to vinaceous-buff); immaculate on chin, throat, and belly; sharply streaked with dusky on sides of head, on neck all around, and the fore-breast; elsewhere wavy-barred with dusky, heavily on sides of breast, sharply and regularly on axillaries; lightly on flanks and under tail-coverts. Bill decurved, blackish above, lightening at base of mandible; feet and legs black. Length 419.1-457.2 (16.50-18.00); wing 247.6 (9.75); tail 100 (3.94); bill 88.9 (3.50); tarsus 57.9 (2.28).

Recognition Marks.—Small crow size; mottled and streaked, dusky and pale buff; rather stout *decurved* bill of *moderate* length; broad, blackish crown-stripes; beach-haunting habits.

Nesting.—Does not breed in California. *Eggs:* 3 or 4; much as in preceding species. Av. size 57.7 x 38.9 (2.27 x 1.57).

General Range.—Breeds in Alaska from the mouth of the Yukon River and along the Arctic Coast of North America. Migrates south chiefly along the Atlantic and Pacific coasts through Mexico and the West Indies to the Galapagos, Chile, and Brazil.

Distribution in California.—Abundant spring and fall migrant, chiefly coastwise, but also at various interior points: Dos Palos, May 22, 1914, May 22, 1916; Salton Sea, Apr. 27, 1917; Bishop, May 29, 1919. Returns to (Ventura County) coast by July 10th. Casual in winter: Santa Cruz Island, Dec. 8, 1907 (Linton); Santa Barbara, Dec. 26, 1914.

Authorities.—Cassin (*Numenius hudsonicus*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 744 (Presidio); *Grinnell*, Pac. Coast Avifauna, no. 1, 1900, p. 27 (n. Alaska; breeding habits, nest, eggs, etc.); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 30 (San Joaquin Valley; habits).

KNOWN only as a migrant, the Hudsonian Curlew, or "Jack," as he is affectionately called, is one of the most familiar and picturesque features of California beach life. The Jacks are wary without being unreasonable about it. A little artifice of approach will ensure a coveted "specimen"; but slaughter is, fortunately, a difficult matter and the price one inevitably pays for any display of firearms is the forfeiture of Curlew confidence along that immediate stretch of coast. Since Jack's tenure of the beaches is coincident with the period of our own greatest interest, viz., in July and August, it is rather important that we understand each other. The Curlews ask only to be let alone, and if one will really mind his own business while at the beach, he may have most rewarding views of these feathered gentry as they sidle toward the quiet watcher, or "cross his bows" between the upper beach and the surf.

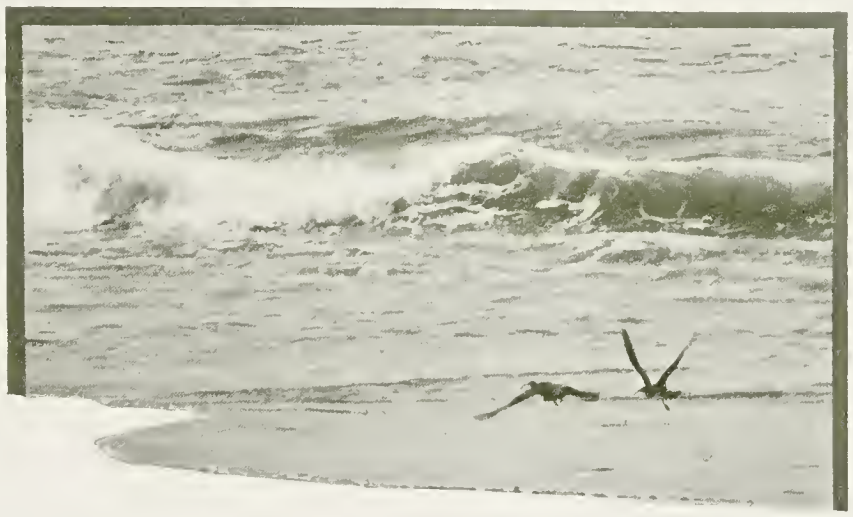
Taken near Santa Barbara *Photo by the Author*

TWO SANDERLINGS ARE INCLUDED

Hudsonian Curlew

Bird in foreground, about 2/7 life size

Allan Brooks 1913



Taken near Santa Barbara *Photo by the Author*

ALARM

Left to themselves, the Curlews will often while away a month or so at a given station, even though they have hailed from Alaska and are bound for Ecuador. At such times they seem to be really resting up after the ardors of intense domestic experience, crowded at times into a period of six weeks, in the high North, and the labors incident to a journey the first leg of which has already measured 2000 miles. The Curlews deploy, then, upon the dry sands of the upper beach and either potter about on listless lookout for passing insects, or else squat upon the sand, tuck bill under wing, and lose themselves in dreams. There is always at least one wary fellow on guard, however, and let but the smallest appearance of motion, be it only a khaki hat, break the purity of the sky line among the attendant sand dunes, and a quaver of warning puts the scattered flock on guard. Sleepy heads are stealthily withdrawn; the birds rise slowly and begin to creep toward their leader, their neutral-colored bodies scarcely distinguishable against the background of sand; and all meanwhile scanning the horizon for the danger sign. If the alarm spreads, all run down the beach slope for a quick take-off, pass over the surf line, and then parallel the shore with moderate, firm wing-strokes until a safe distance has been reached.

The major portion of the Curlews' fare is also served on the beaches. Although they do sometimes glean at the water's edge, they are fonder of following the drift line where the Talicrid amphipods have burrowed in the sand. These sand-fleas are secured not alone on the surface by agile pursuit, but they are haled from their sandy lairs. The Curlew does not bolt his prey on faith, but he flings it down upon the beach for a glance of inspection. The crustacean promptly attempts to decamp, and the bird plays cat-and-mouse with it until it is subdued, or possibly until it is *shaken free of sand*, before he will condescend to swallow it. The general scene of these spirited operations bears witness after the birds have fled, for the sand is stippled by the proddings of a thousand beak-strokes. Other food—seeds, berries, grasshoppers and other insects—is secured about the brackish lagoons; and in the alternation of these pursuits there is never wanting variety in the Curlew day.

Taken in Santa Barbara
Photo by the Author

AS SEEN FROM THE TOP OF THE CLIFF

Hudsonian Curlews are among the earliest of returned arrivals from the northern breeding grounds. Willett, speaking for southern California, says[1] that they appear about the first week in July, and that by July 10th they are abundant along the beaches. I am usually away in the mountains during June and early July, but I have returned in time to see a flock of twenty on July 10 (1919), and have found them abundant along the Santa Barbara coast by July 22nd. They linger till late October, and I have seen a few stragglers in winter. The spring migrations are said to begin in late February (Tyler) in the interior, but I have never seen the birds at Santa Barbara before April, and the period of maximum abundance is the first week in May. Birds seen in June are probably stranded non-breeders; but I take it that two birds seen near Bishop on May 29th, 1919, had merely lost their way and turned up on the wrong side of the Sierras.

Concerning the notes of the Jack we will let a devoted admirer, Mr. John G. Tyler, bear witness:[2] "There are no birds with which I am acquainted that can compare with these splendid waders in the rich musical quality of their voices. On the last day of one April I encountered a large flock of curlews in a grain field, part of which was being flooded at the time with irrigation water. In one place there was an area of probably five acres that was covered with water to a depth of several inches. The surrounding higher ground supported a considerable growth of stubble left

[1] Pac. Coast Avifauna, No. 7, 1912, p. 39.
[2] *Ibid.*, No. 9, 1913, p. 30.

standing from the harvest of the preceding summer. Approaching to within sixty yards of the big fellows, as they stood bunched at the water's edge, I concealed myself as best I could and enjoyed an opportunity to become better acquainted with these most interesting birds. The nervous lispings, that at my approach threatened to break into the clamorous, screaming flight calls, finally subsided and the birds fed and waded about in the water or preened their feathers while standing stork-like on one leg. Suddenly I was thrilled with a medley of subdued pipings so marvelously sweet and musical that I could hardly believe the sound came from my flock of curlews. The faintest whispering it seemed, yet the liquid melody was really far-reaching and was, as I afterwards learned, distinctly audible from a distance of a quarter of a mile when atmospheric conditions were favorable. A strange nervous unrest seemed to affect the entire group on the ground. The whistlings became louder and the cause was suddenly revealed to me when a curlew call from overhead drew my attention to a flock of new arrivals, nine in number, that were circling preparatory to joining the company at the pond. My surprise and admiration knew no bounds when I realized the sublime heights at which these travellers through the sky had been flying. Mere specks they appeared, and yet their melodious call rang clear and distinct."

Taken near Santa Barbara *Photo by the Author*

JACKS IN FLIGHT

No. 254

Black-bellied Plover

A. O. U. No. 270. **Squatarola squatarola** (Linnæus).

Synonyms.—Beetle-head. Bull-head. Ox-eye. Helvetian Plover.

Description.—*Adult in summer:* In general black (below), white (laterally and circum-posteriorly), and black-and-white (above). Lower eyelid, forehead, sides of crown, neck, and breast, flanks, lower belly, crissum, lining of wings, and upper tail-coverts white, the last-named lightly barred with blackish; sides of head and remaining underparts sooty black to jet black; axillars sooty black; above chiefly black, varied by gray (hair-brown) and white tips, the gray prevailing on the fore-crown, gray and white on the wing-coverts; primaries dusky brown with large basal areas of white, and distal portion of shaft (increasing inwardly) white; tail black and white barred. Bill and feet black. *Adult in winter:* Quite different. Black of underparts wanting, *except on axillars*, white instead; the white pure on chin and throat, lower breast, belly, crissum, flanks, and lining of wings; elsewhere finely streaked or mottled or shaded with dusky, above grayish dusky, spotted and tipped with white. In respect to this spotting interminable differences occur, but a finely checkered pattern prevails. *Immature:* Similar to adult in winter, but head and neck streaked and back spotted with yellowish buff. Length 266.7-304.8 (10.50-12.00); wing 203.2 (8.00); tail 76.2 (3.00); bill 30 (1.18); tarsus 47 (1.85).

Recognition Marks.—Killdeer size or larger; black and white in broad design, and without *distinct* yellow above. (The buffy spotting which appears on the upper plumage of immature birds is, however, to be particularly remembered. Reports of "Golden Plovers" seen in California usually simmer down to young Black-bellies). Below black (in summer) or nearly white (in winter or young); *axillars black* at any season. Similar to succeeding species but larger; bill and head larger; presence of hind toe distinctive.

Nesting.—Does not breed in California. *Nest:* On the ground, or a hollow in tundra moss. *Eggs:* 3 or 4; light or dark buffy olive, heavily speckled and spotted with dark browns or blacks. Av. size 51.8 x 36.3 (2.04 x 1.43).

General Range.—Nearly cosmopolitan, but chiefly in the Northern Hemisphere, breeding far north and migrating south in winter; in America to the West Indies, Paraguay, and Peru.

Distribution in California.—Common spring and fall migrant; less common winter resident, coastwise. Occurs irregularly in the interior, even in winter.

Authorities.—**Gambel** (*Squatarola helvetica*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 220 (coast of Calif.); *Dwight*, Auk, vol. xvii., 1900, p. 383 (plumages and molt); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 78 (distr. and migr.); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 10 (Santa Barbara; migr. dates).

IN THE APPRECIATION of Nature everything depends upon the point of view. Thus, our attitude toward the Black-bellied Plover may be that of the artist, the sportsman, the farmer, the economist, or the scientist. It may be each of these in turn, or all together, or it may be something better still. It may be the friendly, sympathetic, penetrative

Ploverdom

Black-bellied Plovers, Sanderlings, and a few Western Sandpipers make up this company

From a photograph by the Author

Taken near Santa Barbara

Taken at Sandyland
Photo by the Author

A SPRING PORTRAIT

attitude of the bird-lover. The scientist acquires facts; the sportsman, experience (of a sort); the artist, impressions, or visions of beauty; the economist mediates between them all and passes sentence of life or death; but only your bird-lover *lives* his birds. He it is who enters by an effort of sympathy into all the aspects of nature, and pronounces them good. He knows.

The artist, I submit, ought to have the first chance to pass judgment on the value of our plovers. Be the waters of Santa Barbara channel never so blue, as on this September day, the shore golden, and the air vibrating with conscious purity after two thousand leagues of matchless ablution, there yet lacks something in the vision unless a flock of Beetle-heads, splendid, tumultuous, is hurrying across the sky. The strand, glistening though it be with each fresh silvering of the refluent wave, is a barren mockery unless it may reflect the beauty of some Shore-bird. And what more haughty image may it give back than this plover in his nuptial panoply of black? Or what more modest and demure than the dove-like "grays" of autumn? If it were to paint a portrait in the narrowest sense, the painter could hardly do better than depict that large, gracious eye, that "beetling," capable brow, or that expression, half naïve, half stern, and altogether powerful, which greets the fortunate student on an unexploited shore.

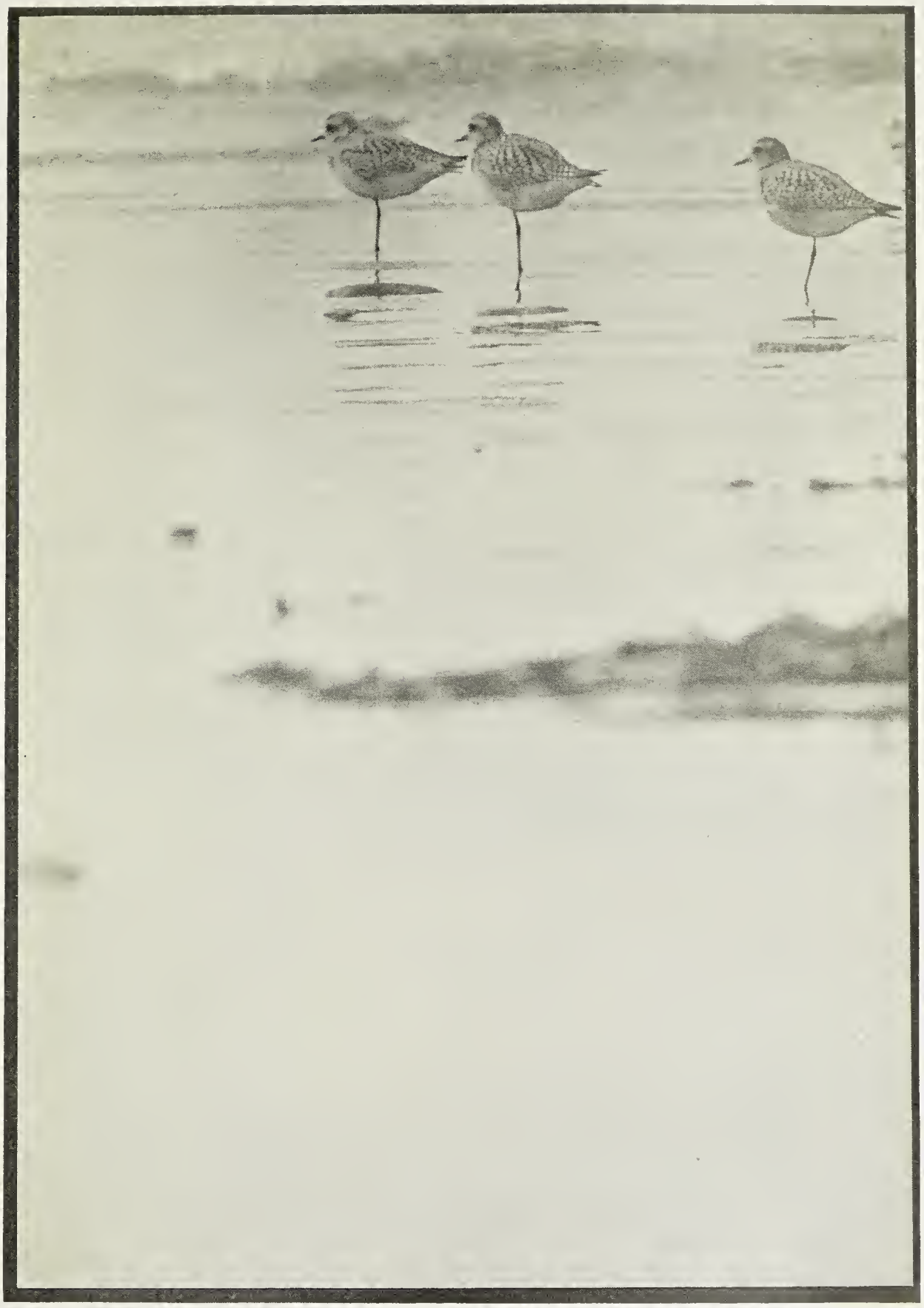
But the sportsman has long claimed this bird for his own. Its numbers mark it for the pot, while its increasing wariness invites genteel destruction. Sapid its meat unquestionably is, tender, and well-conditioned in the early fall. Its northern residence has assured the bird

Taken at Sandyland *Photo by the Author*

GRAY PLOVERS

a heavy blanket of fat, a traveler's larder, which supplies the needful caloric consumed by the powerful pectoral muscles until the bird is safe within the tropics. These plovers respond to decoys, and may be "tolled" in by the easily imitated whistle. It is, however, one of the wariest of birds to eye, under persecution; and from the circumstance of its migrating chiefly along the sea-coast, where it is able to put out in case of danger, it has measurably escaped the doom which has overwhelmed many of our Shore-birds.

The economist finds nothing to condemn in the habits of the Beetle-head, and something to commend in that it feasts heavily upon grass-hoppers as often as it visits the uplands. It is with us, however, chiefly a beach bird and, according to Knight, its food "consists of small mollusks, worms, small crustaceans, brittle-stars, small holothuria, and similar material left by the ebbing tide, varied by more or less insects and larvæ picked up in the marshes at high tide." I have myself seen them seize pieces of kelp stranded upon the beach and thrash them about, apparently for the purpose of dislodging clinging mollusks. At other times they will feed furtively, by little snatches and quick recoveries, as they retreat along the beach.

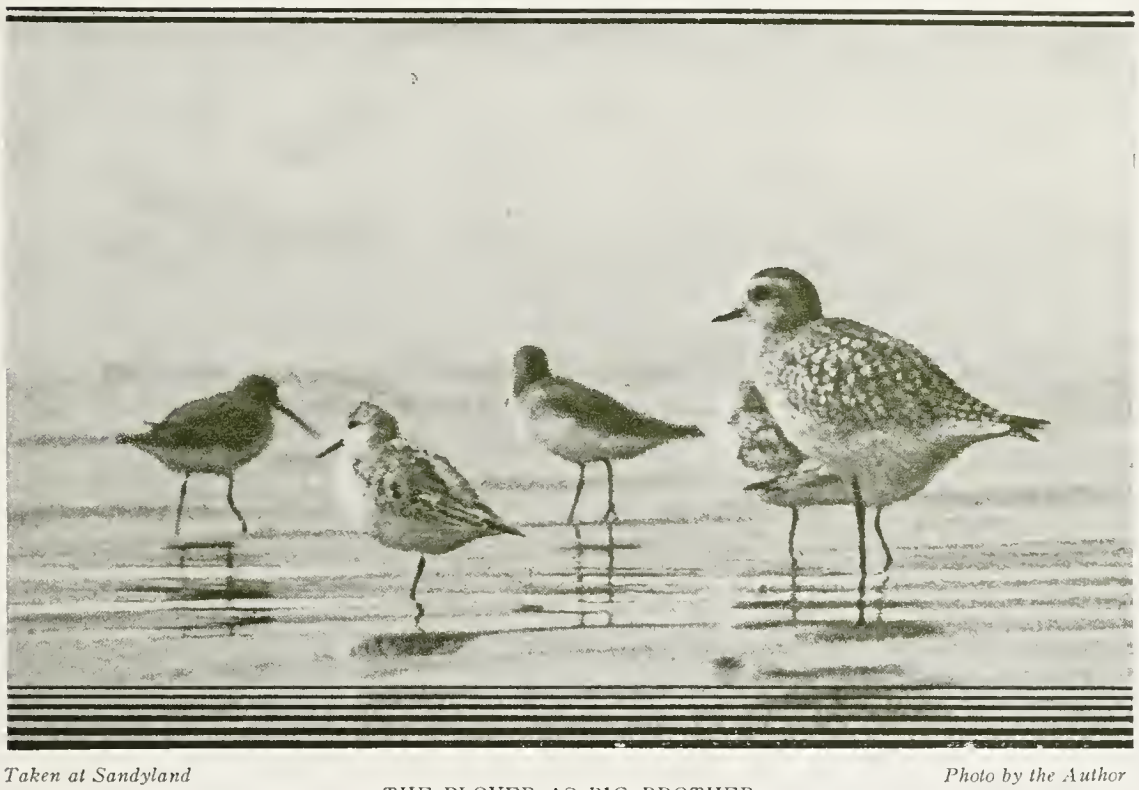


Three One-legs

"Gray" Plovers at Sandyland

Negative and cutout by the Author

The scientist knows that *Squatarola squatarola* is nearly cosmopolitan in its range, although it breeds only in the Arctic zone; that it is closely related to plovers of the *Charadrius* group, from which it is separated only by the trifling circumstance of having a tiny hind toe; but he does not know, apparently, any good reason why it should ever have been called the Helvetian or Swiss Plover, since it neither breeds nor winters in that tiny republic of glaciers. Many other things the scientist is ready to offer, but we are anxious to reach the accepted domain of the bird-lover, and



Taken at Sandyland *Photo by the Author*

THE PLOVER AS BIG BROTHER

to declare that the bird belongs to us and to us alone, by right of sympathy. Only by the give and take of friendly pursuit, or by quiet observation, may one come to feel really acquainted with any bird. The Black-bellies are very wary with us upon arrival from the north, during the last week of August or early in September. A hat-brim thrust over the edge of the sea-cliff will send the flock scurrying seaward. They are somewhat more tolerant of an unconcealed approach along the beach, merely taking the precaution to quit the upper beach and to draw together. At times they will gather at the water's edge and endure some buffeting by the waves before taking flight. On wave-swept ledges I have seen them rise before

Taken near Santa Barbara *Photo by the Author*

A DISTANT PASSAGE

the wave and settle again, after the fashion of Turnstones, quite determined to hold their own.

In taking flight, at leisure, the plover is quite sure to stand a moment with uplifted wings—to shake out the sails—before casting off. This reveals the black axillary feathers, which are a distinguishing mark of the species at all seasons. If possible, a little run precedes the flight, preferably down the beach slope. Again on alighting, the sails are held aloft for a moment if the footing is narrow; but if there is room for a run, the bird checks its momentum with the feet instead.

Purposeful pursuit makes the birds suspicious, and I have spent a half day with the camera without getting nearer than thirty yards of them; while my boys, engaged meanwhile in excavating a sand fort, declared the birds came within ten feet of them. I got even with this bunch of birds, though. Noting a considerable flock resting at a distance along the lower sands, I stripped off and went into the ocean, paralleling the shore until opposite the plovers, and then letting the waves wash me in like a stranded seal pup, until I lay within twenty feet of the nearest birds. I was near enough to catch the gentle curiosity and apprehension in their eyes. Some actually drew nearer to this plaything of the billows; but most of them held back haughtily, as though divining a disguise. There were other species of Shore-birds in the flock, and it was the Snowy Plover who, as host and rightful guardian of the beach, felt the most responsibility, and pressed close to riddle my Neptunian sham. Never a merman so blushed before a court of kelp maidens—blushed and gloated.

Plover and Sanderling Frieze

From a photograph by the Author

Taken at Sandyland

The association of species, "mixed companies," is a familiar feature of Shore-bird life, and the Black-bellied Plover is one of the most sociable of the friendly family. In their local movements they will tolerate any of the lesser sorts, but their preference for the Sanderling is rather marked, especially in the case of a single bird. The little urchins troop at the heels of their larger protector and dog his steps, when one would suppose that he would far rather enjoy the company of his own kind. But the Beetle-head appears to accept his responsibility good-naturedly, and it is probable that the schoolboy rout and its chosen leader do off great distances together. The Black-bellied Plover, also, is the only Shore-bird I know which will not give heed to the extravagant alarms of the Killdeer. *Squatarola* forms his own judgments of right and wrong, and acts accordingly.

The note of this Plover is a drawling and somewhat melancholy whistle, *we'-u-we* or *hee'-oo-ee*, descending to a lower pitch in the second note, and returning with a softer utterance on the last. This liquid sound, for all of its mournful tinge, is one of the sweetest in nature; and it takes no stretch of the imagination to picture a wooing conducted in such dulcet tones. But in the South, this note is usually heard just before or immediately after the birds take wing, and is evidently a note

Taken near Santa Barbara
Photo by the Author

BATTALION DRILL

THE REVIEWING OFFICERS ARE BLACK-BELLIED PLOVERS, WHILE SANDERLINGS ARE THE SOLDIERS

of alarm rather than of invitation. It is easy enough to reproduce, and I have tried it on many flocks, but it seems always to make them immediately apprehensive, as do their own renditions. Once a flock, which had previously shown little uneasiness in my presence, took instant flight when I sprung this "call" on them. The joke was on the birdman.

No. 255

American Golden Plover

A. O. U. No. 272. **Pluvialis dominicus dominicus** (Müller).

Synonyms.—Field Plover. Bull-head.

Description.—*Adult in summer:* Above dusky, blackening on tips of feathers on back and crown, lightening to fuscous on wing-coverts, tertials, sides of neck, etc.; spotting sharply on back and crown, less distinctly on neck and upper tail-coverts, with bright ochre-yellow; primaries blackish, the basal and a concealed distal portion of each quill white; tail dusky, barred irregularly with lighter grayish brown; entire underparts, except lining of wing, including sides of head, glossy brownish black; an area of pure white continuous across forehead passes over the eyes, along the sides of the neck, and expands on the sides of the breast, sometimes nearly meeting in front; sides of breast, and connecting upper sides narrowly, behind the white, color and pattern of back; axillars and lining of wings smoky gray or ashy. Bill and legs black. *Adult in winter:* Usually less decidedly black on back; the spotting (streaking on hind-neck) finer on upperparts; the ochre-yellow brightest on upper tail-coverts; elsewhere more or less displaced by paler yellow and whitish; below without black; throat and crissum dull white; elsewhere streaked and spotted with light brownish gray, a lighter shade of the same vaguely diffused over the plumage, or else underparts definitely brownish gray finely spotted with white. *Immature:* Like adult in winter, but lighter below; only the breast tinged, and that uniformly, with light fuscous; pattern of neck all around blended. Length 241.3-270.4 (9.50-11.00); wing 173.5 (6.83); tail 65 (2.56); bill 22.6 (.89); tarsus 45 (1.77).

Recognition Marks.—Killdeer size. "Golden" speckling of upperparts distinctive; somewhat smaller than preceding species; bill decidedly smaller; not so white below in fall plumage; axillars *brownish gray* instead of sooty black.

Nesting.—Does not breed in California. *Nest:* On the ground, with a scanty lining of leaves and grass. *Eggs:* 4; olive-buff of various degrees of intensity, boldly spotted and blotched with brownish black. Av. size 50.8 x 33.3 (2.00 x 1.31).

General Range.—Breeds in the high North from Point Barrow in Alaska, east to Hudson Bay. Winters on the open plains of Brazil, Argentina, Bolivia, etc. Migrates in the fall by way of Labrador and the Atlantic Ocean route from New Brunswick and Nova Scotia via Bermuda and the West Indies. Returns in the spring via the Mississippi Valley. Casual or irregular elsewhere during migrations from western Europe to the Pacific Coast of America.

Occurrence in California.—Of rare occurrence during migrations; sporadically abundant. Requires careful distinction from the foregoing species and from the

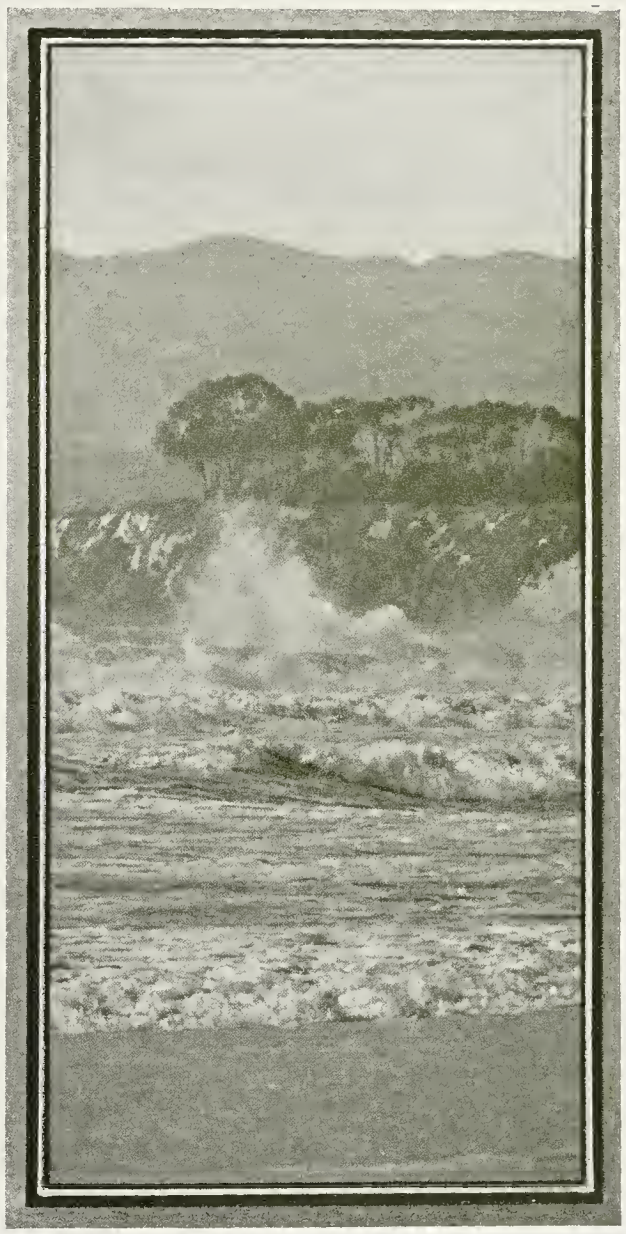
(hypothetical) Pacific Golden Plover (*Pluvialis dominicus fulvus*), which breeds in western Alaska and which has been taken as far south as Comox, Vancouver Island (Brooks).

Authorities.—Gambel (*Pluvialis virginiaca*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 220 (coast of Calif.); *Cooper and Suckley*, Rep. Pac. R. R. Surv., vol. xii., 1860, p. 229 (San Francisco); *Cooke*, U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 80 (Santa Cruz, p. 84; distr. and migr.); *ibid.*, U. S. Dept. Agric., Bull. no. 185, 1915, p. 16, fig. 4, map (migr.); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 458 (desc., occurrence, habits).

THE RECORDED appearances of this species are so few, only four or five in number, that the bird is scarcely entitled to a rating above "accidental" in California. Indeed the word "accidental," never quite accurate in the estimation of any natural occurrence, most nearly describes the wide deviation from custom of those golden waifs which straggle down the Pacific Coast instead of keeping to the eastern route.

Alleged Californian occurrences are worthless without specimens. The plumage of immature Black-bellied Plovers seen during fall migrations sometimes exhibits a fulvous, or tawny, character which would deceive the very elect. The speckling of *P. dominicus* is really "von goldt," but like other appearances of the precious metal its determination requires the acid test.

The migration route of the American Golden Plover is in many respects the most remarkable of any species in the New World. Distributed in summer along the Arctic Coast of America from Hudson Bay to Bering Strait, the birds at the close of the breeding season move



Taken near Santa Barbara *Photo by the Author*

NOT A BIRD IN SIGHT

sharply eastward to Labrador. Here they pause for a season to fatten on berries, then move south to Nova Scotia, whence they set forth, about August 25th, to accomplish by a single sustained effort an over-sea flight of from 2000 to 2400 miles to the Lesser Antilles and South America. The winter home is in southern Brazil, Uruguay, and Argentina. The return journey is accomplished by an altogether different route, viz., one plotted *via* Bolivia and northern Peru, thence by air to Texas, or, rarely, Yucatan, and so "homeward" by a leisurely course up the Mississippi Valley and through central British America. Spring shooting in the Mississippi Valley, coupled with easterly storms on the Atlantic Coast, and, latterly, the increased occupation of Argentina by agriculture, have conspired together to reduce this once enormously abundant species to the verge of extinction. The species is recovering somewhat under Federal protection, but will probably always require nursing.

Taken near Santa Barbara *Photo by the Author*

THE MER-FOLK

EVIDENTLY THE GOLDEN PLOVERS HAVE BEEN FRIGHTENED FROM OUR SHORES BY SUCH APPARITIONS AS THESE. IN DEFAULT, THEN, OF PORTRAITS OF THE PLOVERS WE PRESENT THOSE OF THEIR PERSECUTORS

No. 256

Killdeer

A. O. U. No. 273. **Oxyechus vociferus vociferus** (Linnæus).

Synonyms.—Kildeer. Killdee Plover. Killdee.

Description.—*Adult:* Crown and occiput and back bright grayish brown, the feathers often sparingly or narrowly edged or tipped with tawny; rump and upper tail-coverts cinnamon-rufous or tawny; tail like back, crossed subterminally by broad black band, and tipped with lighter brown, ochraceous, and white, the lateral feathers irregularly dusky, white and tawny; primaries dusky, the outer with some white on the inner webs, and the inner ones with white on the outer webs; two black bands across chest, the anterior one nearly reaching around cervix; a band on forehead, separating the white and brown, and another across cheek from bill, impure black; included spaces of head and neck, a ring around cervix, and remaining underparts pure white; the brown of back encroaching on sides of breast between black bars, and sometimes suffusing entire space between them; eye-lids bright orange-red. Bill black; legs pale. *Immature:* Like adult, but feathers of upper plumage more extensively edged with tawny; sides of breast and white chest-band more or less overlaid with tawny. *Chicks* have only *one* black pectoral band, but are otherwise strikingly like adult; upperparts mottled black and tawny; feathers of tail filamentous-parted, silky, wavy. Length 228.6-285.8 (9.00-11.25); wing 161 (6.34); tail 91.2 (3.59); bill 20.6 (.81); tarsus 35.8 (1.41).

Recognition Marks.—Robin size; *two* black bands across chest distinctive; tawny rump; vociferous "*Killdeer*" cries.

Nesting.—*Nest:* On the ground, often upon gravel, unlined, or with some accumulation of bark-fragments, dead leaves, and trash. *Eggs:* 4; ovate-pyriform; buffy white or pale olive-buff, boldly spotted and blotched or scrawled with brownish black and with occasional violet-gray. Av. size 38.85 x 26.4 (1.51 x 1.04). *Season:* April–May; one brood.

General Range.—Temperate North America and northern South America. Breeds from central British Columbia, southern Mackenzie, and central Quebec south to the Gulf Coast and Mexico. Winters from the Southern States and casually from southern Indiana and New Jersey south to Venezuela and Peru; casually to Paraguay and Chile. Accidental in Great Britain.

Distribution in California.—An abundant migrant throughout the State; partially resident at most of the lower levels west of the Sierran divide. A summer resident east of the Sierras and in many of the Sierran valleys. Rare or local as a breeder in many sections south of the Tehachipe. Numbers in the San Diegan district considerably augmented in winter. Scarce or casual upon the islands.

Authorities.—**Gambel** (*Charadrius vociferus*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 220 (Santa Barbara); *McAtee*, U. S. Dept. Agric., Farmers' Bull. no. 497, 1912, p. 16 (food); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 31 (San Joaquin Valley; nesting dates, etc.); *Bryant*, Auk, vol. xxxi., 1914, p. 170 (feeding on grasshoppers).

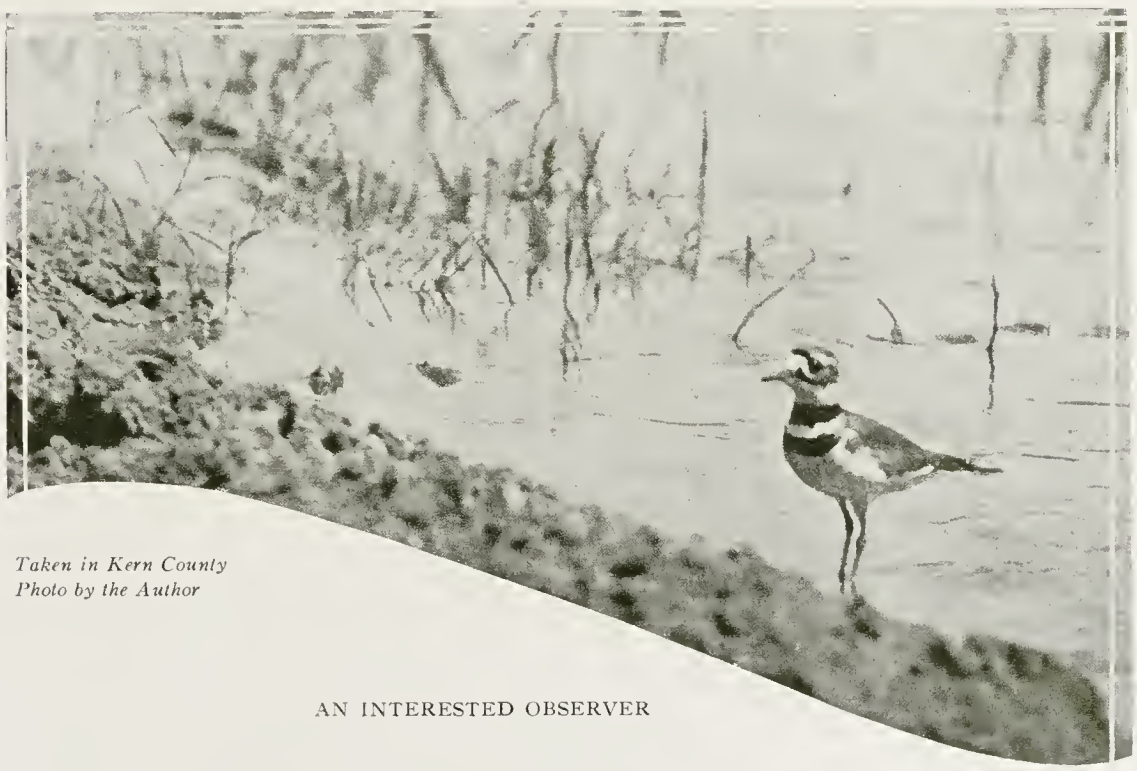
Oxyechus vociferus vociferus earsplitterus ananias! The books concede only the first three epithets: we add the others upon our own authority.

KILLDEERS

Oxyechus is the noisemaker extraordinary, the professional scold, the yap yap artist, the irrepressible canine of the bird world. In season and out of season her (or his) shrill cries arouse the countryside to attention, and in nine cases out of ten the object of her vociferous spite is a human being. *Vociferus* is the arch accuser of the human race, and as sure as a mere man sets foot upon a portion of the domain which she counts her own, every ingenuity of alarm is brought to bear upon him, every passion and prejudice of the wild things is appealed to, and the miserable son of Adam is denounced as a wrecker of homes, an ogre and an outcast. This is unfortunate, whether one's intentions happen to be honest or not. Nobody enjoys being barked at. But be you Beauty's self, or a burglar, it is easier to placate a barking cur than it is to silence the clamorous guardian of the meadows, this self-constituted tutelary of all lesser fowls.

The case is bad enough when the bird has real interests at stake. If you are actually near the nest there is some excuse for alarm, and the

female does not fail to try every ruse in the endeavor to lure you away from the dangerous spot. First she rolls and flounders away across the ground, screaming with agony, as though she had been stepped on. But if you are simple enough to follow, the bird gradually recovers, and is soon able to patter along ahead of you with tolerable celerity. The male, too, is no indifferent spectator. He comes as near as he dares, and shrieks, "*Dear, dear, dear, dear, dear,*" until the wonder is that he does not burst a blood vessel or split his vocal cords. Interested neighbors add their frenzy to the din, until in desperation you are almost ready to believe yourself the frightful villain they are all accusing you of being. If you are willing to quit the place, a bevy of fathers will pilot you out of bounds. One will patter ahead of you with breast pushed forward and legs incredibly nimble, only to pull up presently with a jerk and a compensatory bob to ask if you are following. The others describe a great half-circle about you with graceful wing but unceasing stridor, and take their places in the van. The birds believe themselves extremely clever as they lead you off by alternate flights and sprints, and you may hear them indulge from time to time in a low rapid titter, *teeeee-t*, which you may be sure is quite at your expense. All this racket is bad enough at best, and one may be really sorry to have intruded, at first, but when the whole operation is gone through with again the next time you happen that way, and when you know that the young are long since flying, all this fuss and outcry is distinctly annoying. One feels as if the Killdeer had contracted the habit of yellow-journalism and couldn't let go.



Taken in Kern County
Photo by the Author

AN INTERESTED OBSERVER

As a matter of fact he has. He has become obsessed with a passion for denunciation. The excitements of the nesting season have spoiled him. He has racket and objurgation upon the brain, and long after his own chicks have joined the howling chorus, the Killdeer warns and hectors and incites sedition generally throughout the rest of the bird world. Or, in scientific parlance, the normal reactions of the breeding cycle persist, and are transferred to a broader field. Sportsmen hate the Killdeer and shoot him on sight as a marplot and general nuisance. Stalking game is impossible with such an alarmist on the job. Nor is the case any better with the bird photographer, that most innocuous of mortals. My final and overwhelming lesson came when, on October 11th, 1913, I had sighted on the grounds of the Empire Gun Club a small company of the rare Pectoral Sandpipers (*Pisobia maculata*). It was the opportunity of a lifetime hereabouts, and left to themselves the birds would have proved amenable to those methods of gradual approach and disarming of anxiety which are usually so successful with the Shore-birds. But in this instance an officious Killdeer set himself the task of thwarting all my plans. Not content with effecting his own escape, noisy enough in all conscience, the Killdeer turned back to warn his neighbors, and if a single one of the Pectorals did not dutifully heed the first alarm, the Killdeer returned forthwith and dived menacingly at the delinquent's head. He did this not once or twice, but persistently, insomuch that the "Kriekers" became wilder and wilder, and my last hour's effort with them was

Taken in Kern County *Photo by the Author*

HEAD ON

more fruitless than the first. And such conduct on the Killdeer's part is perfectly habitual. Speaking soberly, I believe the Shore-bird portraits in "*The Birds of California*" might have been twice as numerous and much more excellent, if it had not been for the pharisaical machinations of the Killdeer. Is it any wonder, then, that the author is "sore"?

Dr. Grinnell, in the "Distributional List," characterizes the Killdeer as an "abundant resident of suitable localities throughout the State," with some restrictions as to range. Undoubtedly, the Killdeer is an abundant resident of the State, in the sense that the species is always to be found within our borders, and there are many localities in which Killdeers are to be found the year around. But it is doubtful whether the individual Killdeers are ever strictly resident, that is non-migratory. It is more probable that there is a total redistribution of individuals in winter, but that the fact is disguised to our attention by the quasi independence of each individual bird. There are no "migrating hosts" of these birds, but dwellers by the sea are familiar with the fact that Killdeers do gather *en flock*, and that under such circumstances they behave very much like other Shore-birds. I have seen flocks of fifty Killdeers bunch closely and wheel and turn in silence and disappear in perfect order; but on other occasions the cohesive force has proved insufficient. The flock impulse has broken down, and the impatient individuals have scattered in shrill alarm, and with every evidence of mutual disgust. It is, apparently, only the spell of new and untried surroundings which induces even a brief awe on the Killdeer's part. Thus, I have seen them near Santa Barbara in great scattered

Redrawn by Allan Brooks from photo by the Author

ENTICEMENT

companies deployed over the dry sands of the upper beach, each as silent as a ghost, and each intent upon moving so discreetly as not to challenge the attention of the local Lares. It was a most comforting sight.

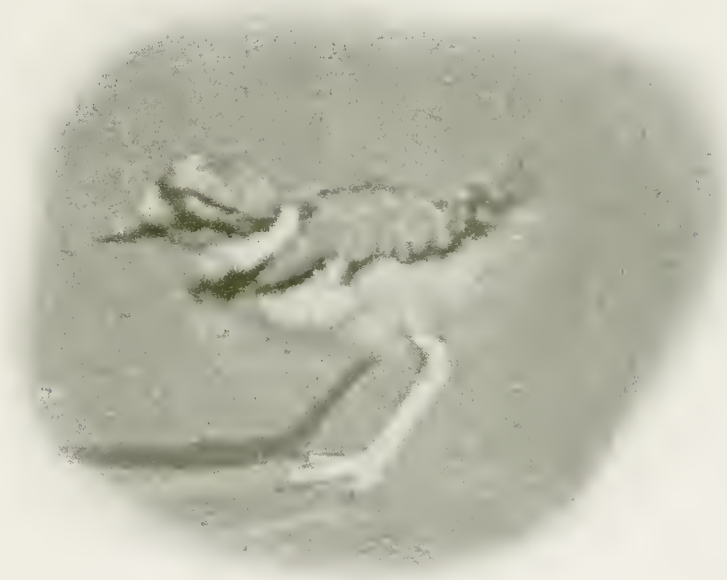
The Killdeer favors open situations wherein convenient access to water offers, be they pastures, meadows, fallow fields, virgin prairies, lake beaches, or mud bars. Being a plover and not a snipe, the Killdeer

Taken in San Luis Obispo County NEST AND EGGS OF KILLDEER *Photo by the Author*

requires a firm footing. Though they haunt the edges of pools and wade belly-deep in water, on occasion, they neither dabble nor probe, but only snatch and glean—and "holler." The Killdeer nests on the ground in the most exposed situations, preferably, but not invariably, those devoid of vegetation. The four eggs are always placed with the little ends inward, and are so closely crowded together into the deep hollow that the major axes incline as much as 45 or 50 degrees, and the larger apices measure sometimes only an inch and a half from egg to egg; this, of course, that the parent bird may have the maximum of covering power over the relatively enormous eggs.

The nest, at times, consists of little more than the supporting earth or gravel; but oftener the nesting hollow is carefully lined with weed-stems, bits of bark, chips, or fragments of cow-dung. On one occasion I found a Killdeer proudly ensconced in the midst of a large dried "cow-flop" whose center had been carefully chiseled away for the reception of her eggs.

At Los Baños the nesting Killdeers are loosely associated with the Black-necked Stilts. The choice of such companionship must involve real self-sacrifice upon the Killdeer's part, for the Black-necked Stilt is the one bird which can outshriek the Killdeer. Moreover, the Killdeer is helpless when the annual flood begins to rise. Instead of scurrying about and shoring up the threatened nest with weeds and trash, as the Stilt would do, the Killdeer only mourns, while the waters invade, and eventually flow over the doomed eggs. I succeeded once, in Washington, in affording succor to a brooding Killdeer whose artless solicitude had rather intrigued my heart. When the flood-waters began to threaten, I built a platform, set up on stilts, and placed thereon the sod containing her nest. At first the bird was heart-broken, having no idea what had become of her eggs, and it was only after a day's patient training, and the use of successive stages of sod approaches, that the bird was led to accept her new and very prominent tower of refuge. Even then I was obliged to provide a sod-covered runway which led up to the platform, and as often as the Killdeer approached or left her nest she used the runway, having no conception of a nest situation except as embodied as a part of terra firma.



Taken in Kern County FIRST STEPS *Photo by the Author*

From this and other experiments, we have learned something of the psychology of the Killdeer, and know that she is a victim of predominant impressions, to use the current phrase. A second mental limitation under which the Killdeer labors, as indeed do all Shore-birds for the matter of that, is that the imminence of danger is measured by its altitude on the horizon.

In illustration of this point I give in some detail the circumstances attendant upon the taking of the portrait on page 1306. It was on the

Cholame flats in San Luis Obispo County. The eternal Killdeer had challenged with the eternal *killdeer killdeer dee dee deer.* A little search had discovered the four handsome eggs; but the bird covered them so quickly after our remove, and in spite of the fact that I had flung my red bandana down within two feet of the nest, that we had instant visions of photographic possibilities. I stationed myself within twenty feet of the nest, and watched the silent posturings of the female under the boiling noonday sun for nearly an hour. But wait as patiently as I might, she would not come within thirty feet, and she spent more time at fifty. Only one snap did I get on a decoy pose, though a thousand offered at too great range or behind too heavy a screen of grass. In noticing the posturing of the bird I was reminded of the hint dropped by a celebrated animal psychologist, who reported that monkeys, when close pressed by larger members of their tribe, invariably offered sex satisfaction as a ransom. I may be wrong, but it seemed to me that the display of fan-shaped tail, the quivering wings, and the amorous rolling of the bird was rather an erotic invitation than an appeal to the palate. Certainly there is lacking in the Killdeer decoy ruse the consistent carrying out of the broken-wing or broken-leg suggestion. It may also be that the play of this bird was half-hearted, both on account of the extreme heat—she was panting at the time—and my absolute apathy. Finally, in despair, I lay down in the grass to see if the bird *ever would* come nearer. Judge of my surprise on arousing five minutes later to find her *sitting on the nest.* As I rose to a sitting pos-

Taken in San Luis Obispo County *Photo by the Author*

RISING FROM NEST
AND BREAKING FORTH IN INSTANT PROTEST

Taken in Merced County *Photo by the Author*

ENTANGLEMENTS
A JUVENAL KILLDEER HAVING TROUBLE WITH THE SCUM

ture she was off instantly and began decoying at 30 to 40 feet. Again I tried "sleeping," and again she returned. But as long as I remained seated or rose to my knees she played off from 60 to 80 feet. Here then was the key to this bird's psychology. *Her distance increased in direct proportion to my elevation from the ground.* If I assumed a supine position, partially buried in the grass, she almost entirely disregarded me. As I rose she pattered away, and if I stood she flew 150 feet. With this knowledge gained, I let my camera, the Graflex, sit upon the ground some 16 feet from the nest, dug a tunnel through the light grasses, then lay down beside the camera with a finger on the trigger. In this way I got three quite creditable snaps at the bird standing over or crouching upon her eggs. Here, too, it is worthy of remark that I had to lay my head flat on its side to completely lull the bird's suspicions; for as often as I reared it a little, she bridled also, or scampered off. It was an absurd and pathetic illustration of the old adage, Out of sight out of mind.

But if Killdeers are anxious regarding the safety of their eggs, this anxiety is raised to the nth power when their young are to be considered. The din attendant upon the defense of those infant prodigies is quite indescribable. And the behavior of the parents on such occasions is worthy of a separate treatise. Mr. Raymond Driver tells me of one reaction which

must be unusual. Mr. and Mrs. Driver were watching a pair whose young were evidently in hiding hard by, and they had looked for them in vain. The male bird (as they supposed him to be) was beside himself with rage, and by way of relieving his emotions he trod the ground furiously. Hold-

Taken in Washington *Photo by the Author*

AN ELEVATED STATION

ing to one spot he stormed and stamped like a child in a pet, and his feet plied like pistons, "3500 r. p. m."

Young Killdeers themselves are delightful absurdities. Their strength is in their legs, and these carry them pattering away before the embryonic juices are fairly dried upon their backs. They need to be nimble, for all nature turns teeth to little birds that cannot fly. When papa or mama thinks best, also, the little fellows will crouch and freeze most dutifully. On such occasions the rump, with its ridiculous tuft of lengthened bristles, is stuck up into the air, and passes muster for waving vegetation. The finding of a chick under such circumstances is a happy accident. Indeed, the discovery at long range, even though the observer be reinforced by

powerful glasses, is often a baffling matter. Just for the game's sake I once visited a certain damp stretch of gravel where I knew the Killdeers were at home. A male bird gave early alarm, but was not joined by his mate until after the lapse of several moments. Both hurried forward and the male devoted himself assiduously to "playing" me, but the female soon retired and took to sneaking in the distance, in what appeared to be a somewhat aimless fashion. After fifteen minutes I caught the flash of another white head near that of the female (150 yards away from me), a *youngster* being coached away by its mother. I marked it down as well as I could and made for the spot; but it was to laugh. I hadn't it at that range within 20 feet; so I retired, under grave suspicion, to spy some more. Again the coaching tactics at 100 yards. The birdling froze as soon as I began to move, but I thought I had a pretty close line on it this time. Arrived at the spot I threw my handkerchief down and searched foot by foot—with increasing mystification. Again I retired. This time I got a "bead" on baby at fifty yards. It was well I did so, for he had found a hidey hole in the shape of a calf's track, and he was a frozen dainty when I reached the spot. Not an eyelid would he bat while I stroked his forehead, but when I lifted him in my hand the spell was broken and he became all animation.

Opinions of the Killdeer will differ endlessly, according to one's own mental reaction. But whatever one's opinion, it is certain that *Oxyechus vocif vocif*, etc., is not a negligible bird. He bulks large in the American consciousness, whether of tyro or scientist. The opinion of the economist is altogether favorable, for the Killdeer is voted a very valuable coadjutor in the endless war against "bugs." The sportsman, too, although he has preferred charges against him, as recited, has no claim upon the bird as food. It is reputed, I believe, to be too tough, or dry, or stringy, or something of that sort; but I suppose the real reason is that the bird is too *individual*. So far as I know, other birds do not resist the impertinence of the Killdeer. Yet I do recall one exception, of doubtful significance. In this a Barn Swallow figured as the pursuer, and a Killdeer, of all virtuous creatures, as the pursued. It was no casual affair either, a playful dive or a perfunctory resenting of intrusion. The Swallow chased that Killdeer from cellar to garret and back again thirteen times while I gazed in astonishment. What the Swallow wanted I do not know; but the Killdeer wanted to get away and he wanted it badly. He succeeded at last in brandishing a clean pair of heels before that wing master, *Hirundo rustica erythrogaster*, and I had seen one of the prettiest and longest exhibitions of aerial fencing ever witnessed, or ever the Swallow gave over the chase. But I haven't the least idea what sort of mischief he could have been up to.

Our own recollection of the bird is softened by tender memories of

earliest springtime in Illinois or Ohio or Massachusetts. At such time the shrill cry of the Killdeer shouting his name is a welcome omen, when it cuts across the frosty sky. His unquiet spirit it is, also, which flits about on moonlight nights. He moves restlessly from pool to pool and shouts as he moves, —a sort of protest, I suppose, against the coming of the moon madness.

Taken in Merced County *Photo by the Author*

DEJECTION

Dry seasons in California, winter seasons, that is, are often marked by an invasion of Killdeers upon our lawns. The winter of 1917-18, for example, saw hundreds of these plucky dears deployed over the lawns of Montecito, or else culling bugs off little two-by-four plots in the center of town. Think of it! a Killdeer! that arrogant tyrant of the pastures who has upbraided us by every epithet found in Roget's Thesaurus, and who has cursed us, besides, in more languages than we know the names of—this termagant of the meadows meekly pattering here over the grass and turning up a deprecatory eye as he scuttles across our bit of a front walk! Arragh! ye impudent spalpeen, I've a moind to have ye arristed!

No. 257

Semipalmated Plover

A. O. U. No. 274. **Charadrius semipalmatus** Bonaparte.

Synonyms.—Ring Plover. Ring-neck.

Description.—*Adult in summer:* A narrow black band across breast and continuous around hind-neck; fore-crown and a band on side of head below eye to bill, and meeting fellow on extreme forehead, black mixed with brown; forehead, indistinct superciliary line, lower eye-lid, chin, and throat, continuous with narrow band across cervix, and remaining underparts, white; crown and nape, back, etc., bright grayish brown; upper tail-coverts and base of tail a little lighter, tail blackish subterminally, the outer pair of feathers pure white, the others decreasingly white-tipped; greater wing-coverts white-tipped; primaries blackish, the basal and subterminal

portion of their shafts white. Bill black, orange-red at base; a bright orange ring around eye; feet and legs yellowish. *Adult in winter:* The black markings replaced by dark grayish brown. *Young:* Similar to adult in winter, but feathers of upperparts tipped with light buffy. Length 165.1-190.5 (6.50-7.50); wing 124.5 (4.90); tail 53.3 (2.10); bill 13.2 (.52); tarsus 24.6 (.97).

Recognition Marks.—Sparrow size, but appearing larger; a miniature Killdeer, but without tawny rump, and with only one *black* band across breast. Feet partially webbed.

Nesting.—Does not breed in California. *Nest:* On the ground. *Eggs:* 3 or 4; something like those of Killdeer, but smaller and not so heavily marked. Av. size 33 x 23.4 (1.30 x .92).

General Range.—North and South America, breeding northerly from Melville Island to southern Mackenzie, Labrador, the islands of the Gulf of St. Lawrence, and the Queen Charlotte Islands; wintering south from South Carolina, Louisiana, and southern Lower California, through the West Indies to Argentina and Chile and upon the Galapagos Islands.

Occurrence in California.—Common spring and fall migrant coastwise; casual about the larger bodies of water in the interior (Salton Sea, Apr. 27 and 28, 1917). *Spring migrations:* Apr. 27 to May 7 (Santa Barbara). *Fall:* July 28 to Oct. 15 (*ib.*).

Authorities.—Cassin (*Aegialitis semipalmatus*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 694 (Presidio; Petaluma); *Coues*, Birds of the Northwest, 1874, p. 453 (syn., life history); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 49 (s. Calif. ids.).

Taken near Santa Barbara *Photo by the Author*

A GENTLEMAN FROM PERU
PORTRAIT OF SEMIPALMATED PLOVER

The Semipalmated Plover

"IN CALIFORNIA the Semipalmated Plover is most common along the shores of the ocean and larger bays. It seems to be equally at home on sandy beaches and on the mud flats of estuaries. Unless too greatly harassed the birds are exceedingly tame and will allow one to approach very closely. They may be found singly, in pairs, in small groups of five or ten, or in flocks of forty to fifty; the companies may either consist entirely of their own kind, or include other small shore birds. When a flock alights on the feeding ground, the individuals comprising it scatter out at considerable distances from one another and thenceforth act with perfect independence. Each runs for a short distance with such rapid foot-movement and even carriage of the body that it seems to fairly glide over the surface of the sand; then it stops abruptly to dab slantingly

Taken in Santa Barbara County *Photo by the Author*

AT HOME ON A SANDY BEACH

into the wet sand for morsels of food. Ground worked over in this manner shows a multitude of bill-marks. The movements of the birds are, as compared with those of sandpipers, more deliberate; now and then an individual momentarily dips its foreparts, a mannerism shared among several of the plovers. Ordinarily when the birds are scattered out over a feeding ground they are oblivious to one another's presence; but, should danger threaten, the signal of one sets all on guard. As they take wing the members of a flock bunch quickly together and fly off rapidly, in close formation, with numerous utterances of their clear two-syllabled call-note. The Semipalmated Plover differs from the Killdeer in being much quieter, more gregarious, and in showing a decided preference for maritime forage grounds."[1]

In strange contrast with the flock impulse referred to above, and which so generally affects wading birds, is the madness of certain individuals who become possessed of crank notions, and go tearing off into space

[1] Game Birds of Calif., Grinnell, Bryant & Storer, p. 471.

Les Timorés

Semipalmated Plover and Western Sandpiper

From a print by Fedora E. D. Brown

Negative and cutout by the Author

Taken near Santa Barbara

on their own account. One such I saw, a Semipalmated Plover, at Sandyland on the 29th day of August, 1911. This bird suddenly detached himself from the company of his fellows and went whistling and corkscrewing through the air like a paper in a cyclone. The presence of the birdman may have been the innocent cause of all this excitement, for as often as this mad prophet repassed the main flock, he shrieked at them to avoid the wrath to come—but the other birds paid no attention whatever to him.

Semipalmated Plovers are common, but never abundant visitants during the fall migrations. Their movement at this season is leisurely, and they occupy about two months in passing, from August 15th to October 15th, with exceptions of a month or so on either side of these dates. There are early accounts of the species wintering at San Diego, but none have been seen at that season in a good many years. The return movement of spring is much more condensed and purposeful. The bulk of the species passes through our borders during the first week in May, but again there are exceptions on either side, and a few stragglers, as always, linger into June, or else abandon the northern journey outright.

On a magic day in May, camera-laden, I visited Cavaletto's Point, west of Santa Barbara, and straightway became engrossed with a little flock of Semipalmated Plovers. Old hand that I am at the game, I shall not soon forget the arduous and delightful hour spent in the company of these confiding little gleaners. A thin fog kept rolling up over the scene of operations, only to be burnt off again by a sturdy sun. The alternating moments of enshrouded mystery and stark revelation would have been romantic enough in themselves, but when the chance of a lifted curtain might bring one face to face with a gentleman from Peru, the occasion was thrilling. The birds fed over the exposed rocks inhabited by the

Taken near Santa Barbara "SUCCEEDED IN WINNING THEIR CONFIDENCE" *Photo by the Author*

rock-oysters, as well as over the intervening sand-beds, and especially about the margins of pools left by the receding tide. Here I followed them with the camera, creeping or shuffling about most humbly, and so far succeeded in winning their confidence as to obtain sixteen plates at distances ranging from fifteen to thirty feet. The Plovers were content, apparently, to regard me as a sort of amiable Triton come ashore to rest, but I heartily wished myself a fellow *Charadrius*, so that I, too, might trip about nimbly snapping up unsalted dainties from the clean white sand, —or else that I might engage in one of those playful tilts where, with ruffled wings and a teetering cry of defiance, one little midget charges at another who has trespassed upon his preserves. A few Western Sandpipers mingled freely among the Plovers and appeared to occasion less distrust on the part of the Plovers than others of their own kind. Perhaps the 'tilts' were chiefly amorous in spirit and not actually hostile.

No. 258

Snowy Plover

A. O. U. No. 278. **Charadrius nivosus nivosus** (Cassin).

Description.—*Adult male in summer:* Somewhat similar to *C. semipalmatus*, but bill entirely black, and black markings of head much reduced; upperparts pale ashy gray, tinged faintly on back, strongly on crown with orange-buffy; wing-quills fuscous and black with some outcropping white on outer webs of inner primaries; greater coverts and primary coverts tipped with whitish; a short black bar across crown, not extending to eyes; a black post-ocular stripe curving downward behind auriculars; a touch of black on lores anteriorly; a transverse patch of black on each side of breast (vestiges of the pectoral collar which marks other species); forehead broadly, sides of head, a cervical collar, and underparts snowy white. Bill and feet black. *Adult female in summer:* Similar to male, but a little duller; crown less tinged with orange-buffy; the black areas invaded more or less by color of back. *Adults in winter:* Still duller; orange-buffy tinge wanting above; the black areas of male largely admixed with gray; the corresponding areas in female entirely gray (color of back). *Immature:* Like adult female in winter, but gray of upperparts a little darker and somewhat varied by paler edgings. *Length of adult:* 158.8-184.2 (6.25-7.25); wing 103.4 (4.10); bill 14.1 (.55); tarsus 25.4 (1.00).

Recognition Marks.—Sparrow size; pale coloration; beach-haunting habits; bill entirely black, and pectoral collar *not* continuous across chest, as distinguished from *C. semipalmatus*.

Nesting.—*Nest:* A mere hollow in sand of upper beach, lined or not, with broken clam-shells. *Eggs:* 3 (4 of record); ovate or short ovate; sand-color, pale olive-buff, sharply, finely, sparingly, and rather uniformly marked with black. Av. of 15 sets in the M. C. O. coll.: 30.2 x 22.1 (1.19 x .87); index 73. *Season:* April–July; two broods.

Range of *Charadrius nivosus.*—The southern United States and northern South America with included areas. Breeds (in the United States) along the Gulf Coast from Florida to Texas, and in Oklahoma and Comanche County, Kansas, and in the western states north (at least) to Salt Lake.

Range of *C. n. nivosus.*—Breeds in California, chiefly coastwise, and in northern Lower California, and interiorly north to Salt Lake. Winters from southern California southward along the western coast of Mexico to Peru and Chile. Of casual occurrence in Oregon, Washington (Gray's Harbor) and the Straits of Magellan.

Distribution in California.—Common resident at local points along the coast —north regularly to Pescadero (in San Mateo County). An isolated colony, possibly resident, near Eureka in Humboldt County. Also occurs in the interior: Los Banos, May 21, 1912, and May 21, 1914; and especially about the larger inland bodies of water; Tulare Lake, May 14, 1912; Goose Lake, June 10, 1912; Owens Lake (Fisher); and Salton Sea (Grinnell).

Authorities.—Vigors (*Charadrius melodus*), Zool. Voy. "Blossom," 1839, p. 30 (San Francisco); *Cassin*, in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 696 (orig. desc.; type locality, Presidio, near San Francisco); *Henshaw*, Geog. Surv. W. 100th Merid., 1876, p. 269 (nesting habits at Santa Barbara).

"JUST THE CUNNINGEST little creatures that ever happened!" So runs our early notebook entry made in Santa Barbara on a December day, when a flock of 55 of these birds was encountered in the little patch of level sand which separates the boulevard from the beach proper. And a more matured judgment sees no reason for change, save that the declaration would apply more strictly to a *baby* Snowy Plover. December, however, is not the moon of babies, and the visitor may be thankful for an intermediate stage leading up to this crowning wonder of the fruitful sands.

The Snowy Plover is part and parcel of the sand. His clothes assimilate its hue so perfectly that a crouching bird may be invisible from shore; and if a moving bird is glimpsed as he patters from the shelter of a footprint, one will hardly guess, at first, that a score of his fellows are also moving. Nor is a sitting bird's breast any such landmark as one might suppose, for the white breast might be a clam-shell, one of a thousand, and the interrupted black bar of the chest,—what is that but a broken piece of charcoal tossed up by the tide! Anyhow, the dainty birds trust to their protective coloration quite implicitly, and it is not till you are approaching the edge of a given area and the birds begin to break from cover to run trippingly down the steep tide slope, or to flit with little cries of dismay, that you suspect the havoc of inconvenience you have wrought.

The sand, the sheltering sand, the glorious, sun-warmed sand, the sparkling, rustling, million-sided sand, why should it not be paradise enough for a little piper! On sand was he cradled, and sand it was which gave his tottering baby foot a soft embrace. Sand is his wet nurse and his

Taken in Santa Barbara *Photo by the Author*

THE APPROACH

FEMALE SNOWY PLOVER STEALING FORWARD TO CLAIM EGGS. THE EGGS THEMSELVES ARE JUST IN FRONT OF THE BIRD, BUT OUT OF FOCUS

dry nurse too. The sands are his gymnasium, circus, arena (to be exact). Here it is he dries his clothes after a plunge, or takes a towel of sand in its powdery warmth and, rising, shakes the dry liquid from him in prismatic showers. Here he woos and battles, loses, triumphs, mourns, or otherwise conducts the business of life. From the sands he wrests his meat and upon the sands alone he couches his slumbering form. And on the sand he dreams, for when the wind stirs up the sand, ah, then it is it whispers to him of soft enchantments and of fairy banquetings. In these hurrying particles a thousand diamonds flash and a million glasses tinkle, and the piper feels himself some fairy regent in a heaven of his own.

Snowy Plovers are resident upon our southern beaches. They are not distributed along over the entire stretch of shoreline, but occur only in most favored situations, usually those which are backed by sand dunes, or which give easy access to a hinterland containing brackish lagoons or a quiet-flowing river. In such places they assemble in colonies numbering from half a dozen to a score of pairs, and if the annual crop of babies is a good one, one may see a hundred birds in August on a given stretch of beach. The Plovers show no jealousy of other birds, and mingle on occasion with such visitors as Sanderlings, Semipalmated Plovers, and Killdeers, or with the lesser sandpipers.

Some of their food is obtained at the water's edge or on the wet sand, and some is taken on the saline flats which border the lagoons; but more of it is found along the dry sand levels which lie above the

ordinary mark of the tide. The Snowies scatter widely in pursuit of food, and spend much time apart, with a decent observance of "sea-room." When disturbed, however, as by a heedless stroller of the upper beach, the birds will muster rapidly at the water's edge, and when all are accounted for will make off in a compact flock, which is for the moment indistinguishable from a bunch of peeps.

Certain observers assert that our shoreline population of Snowies is largely augmented in winter, or changed outright. It is true that the local distribution in winter does not entirely coincide with that of summer, and there is more flexibility of movement; but it is at least possible that

Taken in Santa Barbara *Photo by the Author*

"REMNANT OF A ONCE FLOURISHING COLONY"

only those birds which breed along the shores of the larger interior lakes—Tulare, Goose Lake, Salt Lake, and the rest—go to Central and South America in winter, and that our beach population remains practically stationary, an immovable core of satisfaction in a flux of discontent.

For a nest our sand plover requires only the slight depression which may be formed by the pressure of her own breast. The choice of a location is, however, a matter of some solicitude. Several hollows may be

formed of which only one is eventually occupied. For one thing, the bird requires a slight elevation—three or four inches will do—so that she may command an unobstructed view of approaching danger. The bird takes good care not to be caught at home, quitting her charge sometimes at a hundred yards' remove; and it is no easy trick to find the eggs, unaided. If incubation is advanced, or discovery indubitable, the anxious mother may return to practice decoy ruses, trailing a broken wing, grovelling, and the rest. The male meanwhile is describing anxious circles in the offing; or else, by way of distraction, he patters forward until he is sure that he is commanding attention, then stops abruptly, bridling the head, and by repeated bobs challenges your right to intrude. It is rather good sport, too, once a location is made, to return by stealth and watch the female making that long-range sneak from her eggs. Her attitude is eloquent of secrecy. She hugs the sand as closely as is consistent with lightning speed. The tell-tale marks of head and chest are averted, so that only the sand-colored back may be presented to an eye presumably undiscriminating. Pauses are made now and then to note the bearing of the stranger, but the glance is covert and the sandy flight is hastily resumed.

In still weather the vicinage of the nest is enveloped in a network of intersecting tracks; for the bird never leaves or approaches the eggs save

Taken near Santa Barbara *Photo by the Author*

"PROTECTIVELY COLORED TO THE POINT OF INVISIBILITY"

on foot, and the male comforts his mate by many solicitous trippings to and fro. These telltale footprints sometimes aid the curious investigator; and it is not inconceivable that the birds themselves require some guidance in these wastes of shifting sands, for they sometimes select a site which is marked by some feature of minor prominence,—a stranded snail-shell, a whitened bit of driftwood, or even, as in the case of one in the M. C. O. collections, an encircling piece of dried kelp. The nesting hollow, moreover, is often carefully lined with broken bits of shell, a mosaic in white which serves to throw the eggs into relief. The eggs, unrelieved, are

Taken near Santa Barbara *Photo by the Author*

A CARELESS NEST

protectively colored to the point of invisibility; and those very traceries and hieroglyphics of black which might serve to distinguish them from sand, make them resemble the weather-stained kelp balls, which outnumber them upon the beach a thousand to one. Indeed, the writer has not yet recovered from the self-satisfaction attending the discovery of a waif plover's egg in a drifted bed of these curiously simulant objects.

The waif egg came by way of misfortune to the birds, for the Snowy Plovers suffer much at the hands of three blind forces, the wind, the

tide, and the unheeding step. The last-named operates by the laws of chance, with dangers ever increasing in proportion as humans throng the beaches. A pitiful remnant of a once flourishing colony still maintains itself within the city limits of Santa Barbara, at a point where thousands of people pass daily. The tide, acting in conjunction with the wind, visits a colony with sudden devastation almost every season, and sometimes overwhelms it in implacable succession.

The wind is a more constant enemy, but with this the bird is probably able to cope. I once found a nest containing three eggs, of which only one, and that one for the space of only a fingernail's breadth, was visible

Taken in Santa Barbara *Photo by the Author*

DUTY HALF DONE

THE BIRD IS STILL TOO FEARFUL OF THE CAMERA TO COVER HER EGGS PROPERLY

above the drifted sand. Leaving them undisturbed and returning two days later, I found the eggs fully exposed and the clam-shell flagging completely restored. How did the bird accomplish this? By prying up the buried treasures? or by removing the unwelcome accumulation beakful by beakful? I could not tell; but a more favorable opportunity offering elsewhere, I first assisted nature by lifting sand into the air by handfuls and letting the wind almost bury the eggs, and then retired to cover to watch the outcome. The female had evidently been sitting all day, for she was glad of a respite and made no feints at returning. She summoned her mate and played with him along the placid margin of the bottled Beale lagoon, then took a bath in its shallows. After this they pattered, as by a preconcerted movement, to the shelter of a sand hummock, where they "wiped" vigorously and elaborately. The return was so delayed

Taken in Orange County *Photo by Wright M. Pierce*

AN ARTISTIC HOME

and there was so little promise of interest, that I allowed my attention to wander to a group of shivering Sanderlings, jostling and crowding behind a low barrier of sand. Imagine my self-reprobation when upon bending a casual glance toward the plover nest I found the female already established. But she had evidently not been there long, for she immediately set about improving conditions. She first rose, then bent down and thrust her beak deep into the sand, bending it upward and *inward* to pry up the egg. After tugging for a time with apparently satisfactory results, she reversed her position, settled to her eggs and began kicking vigorously backward, tedder-fashion, sending the sand away in tiny showers. This done, she performed a similar office for another egg. By the time she had given the whole nestful two rounds of this alternate prying and kicking she had the eggs well clear of the sand, and she settled herself contentedly, head to the wind. It was all done with dexterity and swiftness, and went far to relieve the mind of that anxiety to which the sight of many buried eggs had made it a prey.

Partly, we may suppose, because of average misfortunes, the Snowy Plover finds it necessary to nest twice, at least in our southern latitudes.

The first nesting occurs in late April or early May, and the second in middle or late June. The second nesting is often undertaken in company with Least Terns (*Sternula antillarum browni*), if such are to be found. This association is often very close, insomuch that Mr. O. P. Silliman, observing the birds at Monterey Bay, believes that it is individual. A tern's nest means a plover's nest within a dozen feet or less, with an interval of fifty feet or so separating this consociation from the next paired pairs. In the Carpinteria nesting of 1915, I found two eggs of the tern which had been deposited in a nest already containing three of the plover. But this was undoubtedly a hostile move on the tern's part, rather than a consummated friendship.

Hatching day is a day of manifold anxieties in ploverdom. The old

Taken near Santa Barbara *Photo by the Author*

THE CHOICE OF A LANDSCAPE ARTIST

nest, which may have attracted unwelcome attention by now, is forsaken as soon as possible. One by one the babies are spirited away in different directions, and when they are left under some sort of cover they are

sternly enjoined not to move a muscle,—no, not so much as an eyelid. No one but a fiend would want to harm such cunning bits of mortality, mere fluffs of sand-colored down, spotted and streaked with black, after the approved model of a weathered kelp-ball. But a dog is just such a fiend, and the life of the chick often depends upon its willingness to stay put while its parents are luring the frenzied brute to a fruitless chase. Although I have seen infants crouching momentarily on the open sand, the presence of cover, real or supposed, appears essential to the maintenance of the freezing posture. Otherwise, even under close surveillance, the baby will presently shift at any risk. On a blowy day at Monterey we once startled a baby Snowy which scampered away under the lash of the driving sand. It was looking only for cover, and crouched under the first apology which offered, a bare stick not an inch in diameter which stuck up out of the sand. *Here with eyes wide open* the bantling was presently half buried. Most pitiful of all was the accretion of sand which, moistened by the tears, gathered over the exposed eyes and sealed them fast. Of course we made haste with the camera and did what we could for the infant's comfort before hurrying away.

Taken in Santa Barbara *Photo by the Author*
IN FULL POSSESSION

A Monologue

WHY, IT'S TILLY! None other than our old friend *Pisobia minutilla*, whom thoughtless humans call Least Sandpiper! How do you do? Back from Alaska already! My! How time does fly! Do you know I'll be a great-great grandmother when Nivvy—that's my youngest boy—gets married next spring. But I'm not so old, either; not half as old as

that old frump over by the clam-shell there talking to E. G. E. G. was my mate year before last, but she can have him for all I care. Why, he lost a feather out of his wing right in the middle of the season. Got too close to a Hermit Crab and got pinched. And he didn't *care*, either, that was the worst of it. He has no more respect for his appearance than a drowned petrel. The gulls may get him for all o' me.

But tell you what happened this year? and why I didn't go north with you? The idea! Why, I wouldn't leave this beach for worlds. No; really, I wouldn't. Somehow it doesn't seem respectable—you'll pardon me, my dear—but it doesn't seem quite respectable to go gallivanting across the country with a lot of people you don't know very well, and none of 'em knowing where their next meal is coming from. And can you always be sure of finding that beautiful mossy country you tell about? Yes; the Aurora Borealis may be very fine, as you say; but how about the icebergs, and the ponds freezing up at night? And how about the Snowy Owls coming down to grab you? And how about the falcons and the weasels and the blue foxes? And how about the guns? Why, I don't believe half my gypsy friends ever get back here, even for a look-in. No; little old Santa Barbara is good enough for me. I love sunshine and lots of it. And I love the cool, gray fog that comes stealing in just before sunrise and holds back the heat of mid-July. I love the distant mountain ranges, blue, and crystal-clear, or purplish-hazy, eloquent of mystery. I love the ocean, fitful nurse, generous or capricious. She casts our victuals at our feet, bids us help ourselves, and pauses while we glean her offering. Anon, she drives us from the board, snatches all our dainties and makes off, in spite of protest. Repentant on the instant, she plucks a better provender from her breast and overwhelms our anger with her wealth.

And the sand, the glorious, warm sand, the sparkling, rustling, million-sided sand! Tell me, Tilly, did you ever see the like of it from Yukon to Peru? It's as fine as sugar and as clean as glass. Fill your feathers with it and shake it out in a prismatic halo. And when the wind stirs it, ah, then it whispers to you of soft enchantments and fairy banquetings. A million diamonds flash and ten million glasses tinkle while you feel yourself a fairy god in a heaven of your own. Sand! Oh, sand is paradise enough for me. On sand I was cradled; and sand it was which yielded to my tottering baby footsteps. Sand was my wet nurse; and my meat has been mingled with it. My clothes are colored for the sand. In sand have I loved, joyed, and sorrowed. With sand have I been buffeted withal, scourged, purified, and blessed. In sand have I lived ever, and in sand shall I be buried.

Pardon my emotion, but your traveler does get on my nerves with his tales of something more. This—this is life!

The nesting? Yes, yes, dear, I'll come to that. You'll be astonished, I know, when I tell you that we nest *here*. Yes, right here, on this identical beach within the city limits—horses galloping up and down on the wet sand, bathers shouting and running to and fro, children coming up here in the dry sand with their little shovels and buckets, automobiles by the hundred whirling by on the boulevard behind us. And dogs!

Taken near Santa Barbara *Photo by the Author*

THE ADVENTURER

They're the worst. When the kiddies come, all we have to do is to crouch down in the sand and keep still, or maybe hide in one of the hollows left by a horse's hoof. They can't see; or if they do, we and our babies can run away fast enough. But when the dogs come, horrid creatures! snuffling and yelping, then I have to get busy and do decoy stunts. All I can do is to trail a "broken" wing, or to flutter and teeter in hope that the sillies will come yapping after. If they do, I lead them a merry chase, and take to wing from the water's edge when they are far enough away from my babies. But sometimes they come too near, and then it's a gulp for the red-mouthed fiend and a heartache for me.

This year in April it was Teddy Sanders who laid siege to my heart and fairly wore me out with his nonsense. Why, he'd follow me round and round till I was ready to drop, and then if I'd stop to pick up a bit of a bug, he'd bunt into me and make me listen to his blarney. As if I cared for his sly winks and his quivering wings and his absurd little bows. But, finally, I married him to get rid of him, and we chose that little hummock of sand over there for our home-site. All I had to do was to crouch down and twist around and make a little hollow in the sand, and Teddy hunted up the prettiest bits of shell—he was very good about that—so by the time I had three eggs laid we had the most beautiful white lining. And one day Teddy brought a cork and laid it down beside me on the sand. And I asked him what that was for, and he said—well, he said I might find it handy when I didn't *want* to talk. But really, Teddy was awful nice; and when there weren't any people in sight, he'd come up to the mound—he liked to hear me talk all right, if he did make fun of me—until he had it all covered with toe-tracks. And then one day a man came poking along, looking and looking and looking in the sand. I slipped off when he was fifty yards away and did a special skirt-dance for his misguidance; but when he saw me he only grinned and went on looking. And then by and by he saw the tracks criss-cross on the sand, and then he saw the eggs, for his face all lighted up, while my heart stood still. But he wasn't a bad sort, after all, for he went away without even touching them.

But that afternoon the wind came up. I knew the tide was going to be high that night, and I scented trouble. Teddy stood by me as I sat tight on the eggs facing the wind. The wind freshened and shifted to the southwest. By midnight it was blowing great guns and drenching us with spray, but the tide was not due to be high till two o'clock. Well, you can guess the rest. That was an awful night. By one o'clock the water was spilling over into the lagoon, and a little later a great wave caught us and bowled us over and over before we could rise and seek shelter in the dunes. All my beautiful eggs washed away, and the whole colony—there were seven pairs of us—left desolate!

Yet that cruel, terrible ocean had the audacity to smile next day, and let its soft bosom sink and swell as if it wouldn't hurt a baby lobster. And the sun shone and the sand got dry and rustled, and—Oh, well, that same man found me two weeks later about ten feet away from where we had our first nest, sitting on three eggs that looked to him just like the first ones. Teddy hadn't been able to find as many shells this time to line the nest, but we made it near a white stick lying half-buried in the sand, so that we could see the place a long ways off. Of course the man didn't catch me on the eggs, but he found them all right, and he might have eaten them for

anything I could do to prevent. He wouldn't pay any attention to me, and the skirt-dance is no fun with nobody looking, so I gave Teddy the plover call, *Too leep, too leep*, and we went off down the lagoon and had a good bath. There is no use worrying, you know, about things you can't help.

By and by the man went way, way off and sat down. Only his eyes seemed to get bigger, or rather, he carried his eyes in a black thing that he put up in front of his regular eyes. But the wind was blowing, and I couldn't wait around all day, so I took chances and sneaked back. When I got there my eggs were almost buried out of sight in the drifting sand. I've had that happen before, of course, but I do believe that naughty man held sand up and let the wind blow it over quickly. Well, I showed him.

I stooped over each egg in turn, stuck my bill down deep under the big end and heaved up, pulling in toward my breast. One of my eggs weighs a quarter as much as I do, so that's no easy trick. Then I sat down and kicked the sand out from between each pair of eggs, tedder-fashion, and sent it skiting in a jolly shower. By the time I had gone the rounds with both operations twice, I had those buried eggs up high and dry and was making mugs at that man with the movable eyes. He took himself off after that.

But do you know that man was back the very next day with a big black box! He planted himself about forty feet away and waited. I was scared that time, for how should I know when that black thing might run at me or spread its wings or something. It evidently wasn't like a dog, for I coaxed it to eat me, and it didn't even sniff. I stayed away nearly an hour, but nothing happened. Something really had to be done, for my eggs were getting cold; so I crept back. Well, to make a long story short, that man didn't offer any sort of violence, but just crept a little closer, and made a funny noise in the black thing every time I came back to the eggs; till finally, I let him sit ten feet off and bang away all he pleased. And he was pleased, too, for he smiled and smiled all the time he was there, and he said, "Goodbye, little birdie," when he had to go away with the black box.

I never saw him again till the babies came. Then he came lugging that old black box, and I was mad. Those fluffy darlings to be gobbled up at last! I shrieked to Teddy and he came running to help. We had the babies scattered and we told them to be perfectly still, and they were very obedient. They look just like little dried kelp-pods, anyway, and it takes a sharp eye to find them. But this man worked for an hour till he had all the little innocents rounded up and deposited in his hat. Then he set this hat crown down, upon the sand, and went away. Teddy and I came back and ran round and round the hat till we had a path worn in

the sand, but we couldn't find the children, although we kept calling and calling and heard them peeping all the time. By and by one spilled out of the sky and then another, and then the hat blew over, for the wind was freshening, and we dug under the brim to let the last baby out. This time we hid those babies in good earnest, and told them to keep absolutely still. Poor little Nivvy! I think the man saw him, though he didn't touch him. We found him facing the wind half buried in the sand with his poor little eyes wide open, but each covered with a wet mound of sand.

Oh, must you be going, Tillie? Yes, I believe it is time for a bite. And there is Nivvy, now, chasing a bug over by that Hermit Crab pool. Nivosa! come here this minute! Those youngsters are *so* careless. Yes, dear! I'll see you next spring—if the Caranchos[1] don't get you.

No. 259

Belding's Plover

A. O. U. No. 280. **Pagolla wilsonia beldingi** Ridgway.

Synonyms.—Wilson's Plover. Western Wilson Plover.

Description.—*Adult male in summer:* Above pale grayish brown, varied by paler edgings, approaching fulvous on crown and hind-neck; a short black bar across forehead; a blackish loral stripe from bill to eye; a short superciliary and forehead, clear to base of bill, white; a broad black band across chest terminating on sides of cervix; remaining underparts pure white; wing-quills and exposed tips of tail brownish dusky; shaft of first primary conspicuously white. Bill relatively large, black; feet and legs flesh-colored; no colored ring around eye; iris brown. *Adult male in winter and female in both seasons:* Similar to male in summer, but black of head and chest scarcely showing—dark gray instead, or gray with a fulvous tinge. *Immature:* Like adult in winter, but no suggestion of black in gray of head and chest. Length of adult: 190.5-203.2 (7.50-8.00); wing 114.3 (4.50); bill 21.6 (.85); tarsus 30.5 (1.20).

Recognition Marks.—Towhee size; beach-haunting habits. Distinguished from *Charadrius semipalmatus*, with which alone it could be confused, by its slightly larger size, by its longer, stouter legs, and by its relatively immense beak—more than twice as large.

Nesting.—Not known to have bred in California. *Nest:* A slight hollow in the beach sand, lined, or not, with bits of shell. *Eggs:* 3, rarely 4; pale olive-buff to olive-buff, sharply, finely, and rather heavily marked with black. Av. size 35.56 x 26.67 (1.40 x 1.05). *Season:* May–June.

Range of *Pagolla wilsonia.*—Coasts of southern North America and northern South America.

Range of *P. w. beldingi.*—Pacific Coast from Lower California and Sinaloa to Peru.

Occurrence in California.—Casual at San Diego: several ascriptions, but first definite record that of June 29, 1894 (Ingersoll).

[1] South American Carrion Hawk. (*Polyborus tharus*)

Authorities.—**A. M. Ingersoll** (*Aegialitis wilsonia*), Nidiologist, vol. ii., 1895, p. 87 (Pacific Beach, San Diego Co., June 29, 1894, 1 spec.); *ibid.*, Condor, vol. xx., 1918, p. 187 (Imperial Beach, San Diego Co., May).

A SINGLE example of this southern species, a male, was found by Mr. A. M. Ingersoll at Pacific Beach, San Diego County, on the 24th of June, 1894. It was in close company with a group of Snowy Plovers which nested at that spot, and it shared in the most marked degree their solicitude over an imperilled set of eggs. Mr. Ingersoll concluded, however, after careful study, that the visitor was unmated, a wanderer from the south, and he collected it five days later.

The Wilson Plover is known to occur on the coasts of Lower California, but its status as a resident of that region is still unsettled. It is essentially a beach bird, active and very noisy, and not likely to be confused with our modest "Snowy."

No. 260

Mountain Plover

A. O. U. No. 281. **Podasocys montanus** (J. K. Townsend).

Synonym.—Prairie Plover.

Description.—*Adults in breeding plumage:* Upperparts uniform grayish brown (hair-brown or "snipe-gray"), typically pure but occasionally washed with ochraceous or tawny; underparts white, without black collar, but sides of breast like back, and an obscure wash of this grayish shade across breast; a bar on fore-crown and a loral line from bill to eye black; forehead and superciliary white; primary coverts, wing-quills, and exposed portion of tail chiefly blackish. Bill black; legs dusky, feet blackening. *Adult in winter:* Duller, without black; the upper plumage, cheeks, and sides of breast skirted with ochraceous and tawny; wash of breast darker. *Immature:* Like adult in winter, upper plumage still more extensively rusty with broad skirtings; ground-color a little darker. Measurements, av. of 10 Cal. specimens: length 231 (9.10); wing 145.3 (5.72); tail 62.4 (2.46); bill 21 (.83); tarsus 39.9 (1.57).

Recognition Marks.—Size and general proportions of Killdeer, but stands higher; *no* black on chest, distinctive; no black on head in plumage usually seen; prairie- or plain- rather than beach-haunting.

Nesting.—Does not breed in California. *Nest:* A "scrape," or slight hollow, on the ground of bare prairie. *Eggs:* 3 (4 of record); ovate, less pointed than those of other plovers; deep olive-buff to dark olive-buff, boldly and rather heavily spotted with black, the spots much larger than those of the *Charadrius* group. Av. size 37.6 x 28.2 (1.48 x 1.12); index 75.6. *Season:* May; one brood.

General Range.—Breeds on the arid plains east of the Rocky Mountains from northern Montana to northern New Mexico and northwestern Texas. Winters from northern California and northern Texas south to Lower California and northern Mexico.

Distribution in California.—Not common spring and fall migrant and winter resident, chiefly in the San Joaquin-Sacramento basin, with adjoining westerly valleys, and in the southern district. Has been recorded on San Clemente Island. Also two coastwise records from Santa Barbara: Oct. 19, 1912, and Aug. 25, 1915.

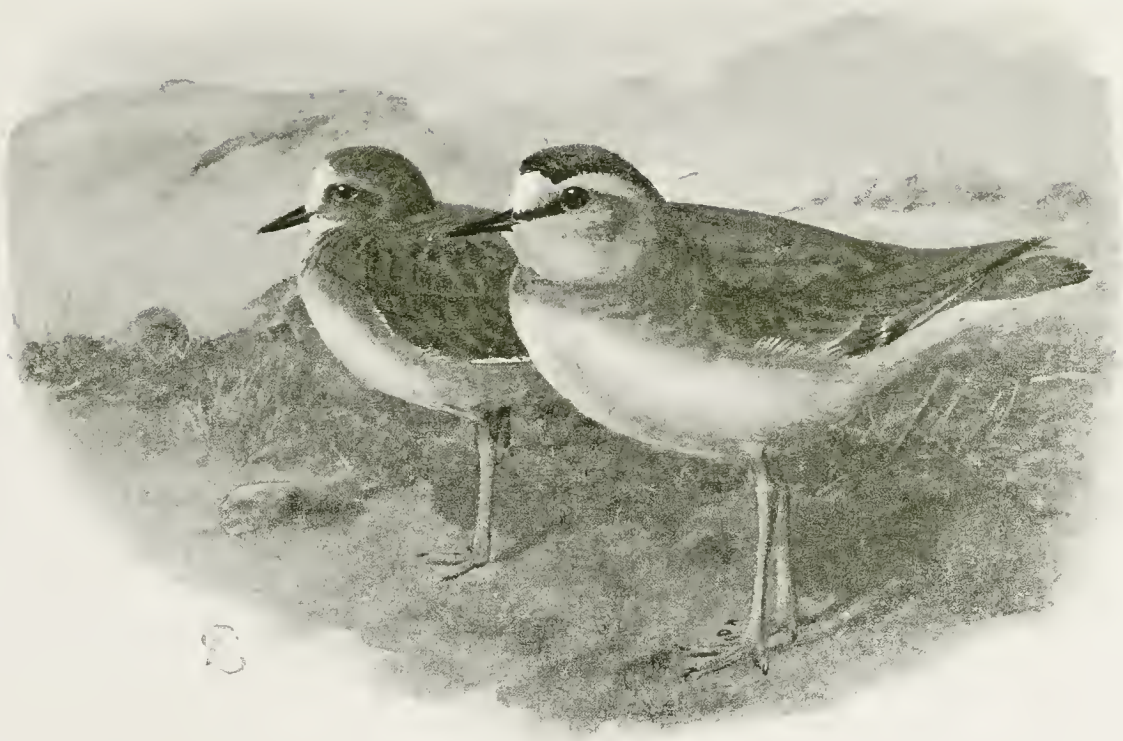
Authorities.—Gambel (*Charadrius montanus*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 220 (coast of Calif.); *Shufeldt*, Jour. Anat. and Physiol., vol. xviii., 1883, p. 86, pl. (osteology); *Bradbury*, Condor, vol. xx., 1918, p. 157, figs. (Colo.; nesting habits; desc. and photos).

PODASOCYS MONTANUS is no more to blame for the name he bears than we are for our names, sur- and Christian. He was not consulted at the christening. *Podasocys* isn't so bad, when we know that it is a Homeric epithet meaning swift-as-to-his-feet, but *montanus* is a sheer misnomer. The bird is a plainsman. In summer he dwells in peace upon the prairies which stretch to the eastward of the Rocky Mountains from New Mexico to the northern boundary of the States; and according to all authorities there is no loneliest township in western Kansas nor waterless desert in Wyoming which will not yield an all-sufficient harvest of grasshoppers. As for drink, dew must suffice, as it does for prairie dogs.

Like many another prosperous farmer of the plains, our hero, when he has accumulated a generous roll (of fat), comes to California to spend the winters. True to his prairie-born instincts, he avoids both the mountains and the shores, and seeks out the level barrens of the interior. Here, it must be confessed, he and his friends have oftenest fallen among thieves. Their rolls have been taken from them without redress and only a dwindling remnant has escaped, spring by spring, to the isolated security of their summer home. For he is an easy mark, this plainsman, when he patters confidingly over a Fresno pasture or the alkaline stretches of Cholame. And he is easier still when he flies with his fellows in a huddled company which crosses the gunner's bows on the coastal plains of Los Angeles County. The Mountain Plover, once abundant, is now becoming a downright rarity, and only the most scrupulous observance of the governmental prohibition will save to us this most useful and interesting species.

Some impression of the bird's former abundance, as well as a lively account of its habits in the South comes from the pen of Elliott Coues:[1] "In the desert region of New Mexico, between the Rio Grande and the base of the mountains to the westward, I found these Plovers abundant, late in June, together with the Long-billed Curlews, and presume that they breed there, although I found no nests. The old birds that I shot were in poor condition and worn plumage. A few were seen in Arizona, at various seasons, but they did not again occur to me in abundance until

[1] "Birds of the Northwest" by Elliott Coues, 1874, p. 458.



MOUNTAIN PLOVER

I reached Southern California, in November of the following year. In the vicinity of Los Angeles I found them in large flocks on the dry plain which stretches down to the ocean. They were not difficult of approach, and I had no difficulty in securing as many as I desired. On being disturbed by too near approach, they lower the head, run rapidly a few steps in a light, easy way, and then stop abruptly, drawing themselves up to their full height and looking around with timid yet unsuspicious glances. Their notes are rather peculiar, as compared with those of our other Plovers, and vary a good deal, according to circumstances. When the birds are feeding at their leisure, and in no way apprehensive of danger, they utter a low and rather pleasing whistle, though in a somewhat drawling or rather lisping tone; but the note changes to a louder and higher one, sometimes sounding harshly. When forced to fly by persistent annoyance, they rise rapidly with quick wing-beats, and then proceed with alternate sailing and flapping, during the former action holding the wings decurved. They generally fly low over the ground, and soon re-alight, taking a few mincing steps as they touch the ground; they then either squat low, in hopes of hiding, or stand on tiptoe, as it were, for a better view of what alarmed them.

"The Mountain Plover's food consists principally, if not wholly, of insects. I examined the stomachs of a great many with reference to this matter, finding in them nothing whatever but insects, excepting, as usual, a little sand or gravel. Grasshoppers, in their season, seem to be the bird's main reliance, though numerous other insects, as crickets and beetles, are also eaten; and I suppose that worms and small land-molluscs would not come amiss. In the fall, when food is plenty, the birds become very fat, tender and juicy, affording excellent eating."

Although the occurrences are quite contrary to known custom, I have twice seen single examples of this bird,

Taken in Colorado
Photo by Wm. C. Bradbury

THE "MOUNTAIN" PLOVER IS A BIRD OF THE PLAINS

Surf-Birds—Flying

From a photograph, Copyright 1913, by W. L. Dawson

Taken near Santa Barbara

both immatures, on the Santa Barbara beaches. The last seen, August 25, 1915, is also the earliest autumnal record for the State. This bird was discovered in company with Snowy Plovers on the dry sand of the upper beach, but it took early occasion to patter down to the water's edge. Here it fed freely with a little group of Western Sandpipers. Its method, however, was altogether different. Instead of the industrious dab, dab, dab of the little pipers, each tiny sand-flea cost the plover a calculated run of several paces and a leisurely stroke. Then followed a quick resumption of the erect posture, and a dignified pause. Once the saucy sea shot a wave past the plover's feet, but the plainsman, instead of taking to wing, back-pedalled with astonishing agility. This reverse motion of the legs was rather a revelation of the bird's powers, making it comparable in its realm to the hummingbird, which is, so far as I know, the only bird that can fly backward.

After this exhibition our hero retired upbeach, squatted down upon the warm sand facing the wind, and took a sound snooze—while we bewailed the absent Graflex.

No. 261

Surf-Bird

A. O. U. No. 282. **Aphriza virgata** (Gmelin).

Description.—*Adults in summer*: Above chiefly black, edged and streaked with white, in finest pattern on head and neck; on crown and cervix faintly streaked and edged with pale cinnamon; on scapulars and tertials broadly and heavily marked with cinnamon (the dominating color in highest plumage, but always sharply varied by black); wings grayish dusky, the greater coverts sharply tipped with white; secondaries extensively white, and the primaries white basally, their shafts white throughout; upper tail-coverts white-tipped, forming with the covered bases of the tail-feathers a sharply contrasting patch of white; remaining portion of tail black, narrowly tipped with white; below white, streaked and spotted with dusky, finely and narrowly on chin and throat, broadly and heavily on breast (where also tinged more or less with gray except in highest plumage), sparingly but sharply and broadly on flanks and under tail-coverts; axillars and lining of wings white. Bill black, flesh-colored at base of lower mandible; feet and legs greenish yellow. *In winter:* General pattern of plumage blended, nearly uniform grayish dusky above and on breast (but retaining definite white of wing- and tail-coverts as before); streaks of dusky persistent on sides of head, chin, and throat, upper belly, crissum, and on lower sides. Measurements (av. of 17 specimens): length 278.4 (10.96); wing 165.3 (6.51); tail 70 (2.756); bill 24 (.945); tarsus 31.4 (1.24).

Recognition Marks.—Robin size. General streakiness with *short* bill, *white* rump, and white wing-patch distinctive, as compared with *Heteroscelus incanus*; larger size and less heavy coloration, as compared with *Arenaria melanocephala*. Inhabits rocks and lives close to water's edge, so not likely to be confused with species other than those named.

Nests and **Eggs** unknown.

Taken at Coronado Beach *Photo by Donald R. Dickey*

SURF-BIRDS A-WING

General Range.—The Pacific Coast of the Americas, breeding presumably in northwestern Alaska (Kowak River), and although wintering north as far as southeastern Alaska (Willett), migrating south to the straits of Magellan.

Occurrence in California.—Not common migrant coastwise. Of regular occurrence at certain "ports of call," rocky headlands, or secluded bays dotted with rocks, both in spring and fall. Casual in winter—Monterey, Jan. 12 (Grinnell).

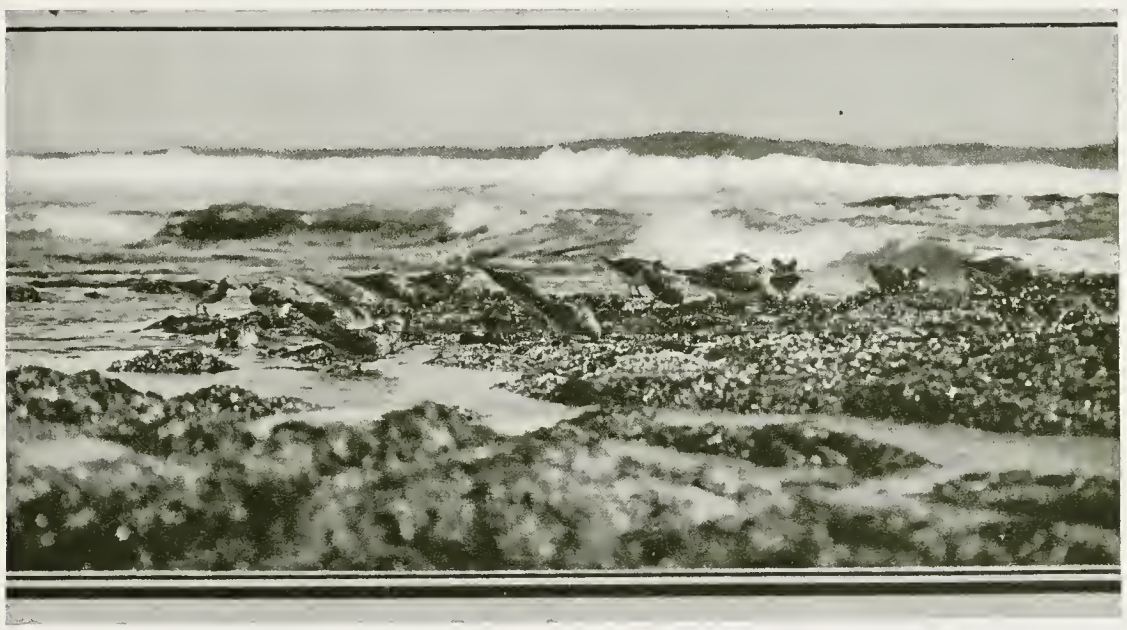
Authorities.—Heermann, Rep. Pac. R. R. Surv., vol. x., 1859, p. 64 (Farallon Ids.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 50 (s. Calif. ids.); *Dawson*, Condor, vol. xv., 1913, p. 5, figs. (Santa Barbara; photos).

THE LATIN word *ignoramus* practically summarizes our knowledge of the Surf-bird after a century and a quarter of scientific contacts. Records of occurrence, beginning with that of Gmelin, published in 1789, are still slowly accumulating. The bird's known range has been from the type locality of Prince William Sound north to the Kowak River in Alaska, and south to the Straits of Magellan. The species is of fairly regular but by no means common occurrence at certain favored stations, chiefly rocky points along the California Coast, during May and September, and there are scattering summer and winter records. Yet for all these "records," there is not in all ornithological literature combined a spoonful of meat regarding the Surf-bird's habits or song or psychology.

Its nesting haunts, indeed, are still unknown, being vaguely surmised to exist somewhere in the interior of northwestern Alaska. Grinnell came nearest to striking the Aphrizine gold-ledge when he secured three specimens on the 29th of May, 1899, some forty miles up the Kowak River; for his Indians recognized the bird by name and affirmed that it nested about certain small lakes in the tundra near the Selawik Mountains. Unfortunately, he was not able to visit the indicated spot.

On a blowy day in May, 1912, the 3rd it was, one of my boys and I lugged the camera across a plowed field toward a rocky point some ten miles west of Santa Barbara. Peeping cautiously over the brow of the cliff we descried a large company of mingled Shags and Surf-birds[1]. The cormorants rose hurriedly and after them the Aphrizids, but the latter settled again while we accomplished a long detour which brought us up, panting, behind a line of rocks substantially on a level with our prizes. I snapped hurriedly at 150 feet, then set out more carefully to make a series of photographic approaches. First, I crept on hands and knees across the upper beach to a jutting rock which offered a little shelter; then advanced by slow stages in a direct line. What matter though the sand was wet and plastered here and there with blobs of crude oil! Were they not *Surf-birds!* Ever and again I snapped. At the sixty foot range a jealous wave engulfed me as I squatted Turk-fashion upon the sands. No matter. It would not do to put the cause to hazard

[1] The substance of this account was published in *The Condor*, Vol. XV., January, 1913, pp. 5-8.



Taken near Santa Barbara *Photo by the Author*

SURF-BIRDS FEEDING ON REEF

by rising. "Snap" went the latch, and "roar" went the shutter, till the first relay of plates, carried in the game pocket of an old hunting coat, was exhausted.

Retracing my steps as cautiously as I had come, I secured another batch of plates and returned to the fray. This time I succeeded in reaching the reef itself and in lessening the distance to some forty feet—a score of Surf-birds at forty feet! They rose at length, for there were timorous souls among them, but they returned or ever I had reached the base of

Taken near Santa Barbara
Photo by the Author

SURF-BIRDS—SHIFTING

supplies. The tide was low and the quarry safe, so we indulged a much belated cold lunch of bread-and-butter, omelette, and cake, all sugared impartially with fine sand. Then I resumed the quest, pausing only to note that the Surf-birds were themselves busily engaged in feeding upon the white barnacles which covered the reef. These seemed to form their exclusive diet for the time; and it was interesting to see a bird get a good grip on a reluctant cirriped, then brace and haul him out by main force. It was yeoman service, and many a bill was smeared with bug juice, not to mention "biramous cirri" and other delicate crustacean apparatus.

There were about twenty of the birds, twenty-three to be exact, and one Black Turnstone kept with them most of the time, although he might have found plenty of his own kind not far away. Once the Surf-birds deserted him and left him trembling on the rock; but I was unprepared to utilize the superb pose which his lonely plight presented a moment later, and he made off with startled cries. As for the Surf-birds, as often as they were dislodged they retired to a strip of sand a few rods away and fell to gleaning like pipers.

Surf-birds—The Parting Shot

From a photograph, copyright 1913, by W. L. Dawson

Taken near Santa Barbara

Surf-birds—The Parting Shot

From a photograph, copyright 1913, by W. L. Dawson

Taken near Santa Barbara

Copyright 1918 by W. L. Dawson

On my last sally from the base of supplies I was determined to press advantage home. The gulls, who would fain have occupied the reef themselves, shrieked warnings when they saw me advancing upon the unsophisticated Surf-birds. The latter gave attention, indeed, but would not heed the repeated warnings. My advances had only the effect of bringing all the flock together, whereas otherwise they would have scattered over the entire ledge of, say, a hundred feet length. Now and again the flock shifted, but always they came back, alighting at the extreme tip of the reef where the waves frequently bandied them. For the most part they fed silently, but as often as I made some unusual demonstration, or as often as the wave swept about them, a murmur of complaint arose. The flock came to attention, or a few shifted position if the water was actually too deep; but the moment danger was over, work was resumed upon the barnacles.

My last exposure, the last of twenty-one plates, was made at a distance of eighteen feet, and at that range only half of the flock would go on the plate. The exposure (f. 16, 1-140) was perfectly timed, and it marked, I am proud to confess, the most thrilling moment of a twenty-year experience in bird photography.

Taken near Santa Barbara *Photo by the Author*

SURF-BIRDS—THE PARTING SHOT

No. 262

Turnstone

A. O. U. No. 283. **Arenaria interpres interpres** (Linnæus).

Synonyms.—Calico-back. Calico-bird. Brant Snipe. Brant-bird. Checkered Snipe. Stone Snipe. Horsefoot Snipe.

Description.—*Adult in summer:* Back, scapulars, etc., variegated black and chestnut-rufous, with a little white edging; the black pure on sides of neck or "shoulders," and continuous with that of chest; rufous predominating on wings; upper lores, cheeks, sides of throat, foreneck and sides of breast glossy black; throat and lower lores pure white, and the remaining portions of head and neck impure white, the crown heavily or lightly streaked with black; rump, basal portion of tail, with lateral and longer upper coverts, the greater wing-coverts (principally), and the remaining underparts entirely, white; basal portion of upper tail-coverts, and subterminal portion of tail, black, the latter tipped narrowly with white and rufous; more or less concealed white on primaries;—altogether a piece of patch-work in three colors. Bill short, stout, sharpened, but not acute, slightly upturned, black; feet and legs bright orange, blackening at the joints. *Winter plumage:* Without rufous; the black mostly replaced by brown, and the rufous by gray; black of breast much restricted—patchy or spotted; chin and throat and sometimes belly faintly roseate. *Immature:* Similar to adult in winter, but with some ochraceous margining above; head chiefly dusky, the fore-neck clouded with dusky. Length 228.6-254 (9.00-10.00); wing 146.1 (5.75); tail 58.4 (2.30); bill 22.9 (.90); tarsus 25.4 (1.00).

Recognition Marks.—Robin size; patch-work in rufous, black, and white above; black and white below; beach-haunting habits. In winter variegated both above and on breast, as distinguished from the more solid black of *A. melanocephala.*

Nesting.—Does not breed in California. *Nest:* A hollow in the ground or pebbly beach, scantily lined. *Eggs:* 4; olive-buff, deep olive-buff, or dull water-green, intricately and sometimes obscurely marked with olive-browns of several shades and some vinaceous gray. Av. size 42.2 x 30 (1.66 x 1.18); index 71. *Season:* June–July; one brood.

Range of *Arenaria interpres.*—Nearly cosmopolitan; breeds in northern portions of Northern Hemisphere south to the Yukon Delta and Japan.

Range of *A. i. interpres.*—As above, except North America east of the Mackenzie delta, the eastern seaboard of North and South America, and the Americas interiorly during migrations.

Occurrence in California.—Common during migrations, especially coastwise. Spring: Santa Barbara, Apr. 25–May 10. *Fall:* Santa Barbara, July 25–Oct. 2. Casual in winter.

Authorities.—**W. E. Bryant,** Proc. Calif. Acad. Sci., ser. 2, vol. i., 1888, p. 44, (Farallon Ids.); *Bowles and Howell,* Condor, vol. xiv., 1912, p. 11 (Santa Barbara, migr. dates); *Howell,* Pac. Coast Avifauna, no. 12, 1917, p. 50 (s. Calif. ids.).

No. 262a Ruddy Turnstone

A. O. U. No. 283a. **Arenaria interpres morinella** (Linnæus).

Description.—"Similar to *A. i. interpres,* but coloration lighter; adult male in summer with cinnamon-rufous areas on upperparts relatively much more extensive, and black areas correspondingly more restricted, and black streaks on pileum narrower; adult female in summer with cinnamon-rufous mostly replacing grayish brown on upperparts; wings and tail averaging decidedly shorter" (Ridgway).

Range of *A. i. morinella.*—Breeds in Arctic America east of Alaska, and migrates south through North America, but chiefly along the Atlantic seaboard through the West Indies and along the Caribbean coast of Central America to Brazil.

Occurrence in California.—Not clearly distinguished from that of *A. i. interpres.* One positive record: Sunset Beach, Orange County, Sept. 20, 1907 (Ridgway).

THE WORLD has always exercised a special tolerance toward brides and grooms. Especially in the matter of dress has every indulgence been shown them, and we have beheld our fellow mortals at nuptials tricked out in trappings and draperies befitting birds of paradise, or cockatoos. In so doing, of course, we have only been aping nature, and our most bizarre effects are feeble in comparison with those achieved by nature's younger children. Turnstones in spring are the original Harlequins. Imagine a patchwork of black and white and bright chestnut so intricate in pattern as not to deserve minute description. Complete the costume with a pair of brilliant orange hose, and you have our candidate for matrimony, very conscious and quite absurd.

Although Turnstones winter sparingly along our shores, and especially on the Channel Islands, they are chiefly migratory. They pass rather hurriedly in spring, breed on Arctic shores, and are back again in

Photo by the Author

THE TURN OF THE TIDE
THREE RUDDY TURNSTONES AT SANDYLAND

early August almost before we have had time to miss them. The nuptial finery has been laid aside, and although the prevailing blackish of upperparts and breast is still highly diversified by white edgings, there is no hoydenish chestnut, and we get the impression of a sober, modest, and companionable bird.

In their local rangings, sand beaches have first choice, and to see the pied pipers pattering after the retreating wave, or else submitting to its playful buffeting, is indeed a pretty sight. Here also the birds

Taken at Sandyland *Photo by the Author*

RUDDY AND BLACK TURNSTONES

scratch, after the manner of chickens, earning thereby the name Chicken Plover. Or if they tire of the sand, they patter among the pebbles, upsetting industriously those which are likely to harbor hidden sweets of bug or worm. Rough, tide-washed rocks come in for second choice; and although the birds cannot do any stone-turning here, they take toll of the clinging creatures, limpets and holothurians and cirripeds, which require a poke and a pry to convince them. They mingle here with their cousins, the Black Turnstones; and although I have seen a large company of the latter receive a brighter pair with some show of haughtiness, there seems to be, for the most part, a pleasant understanding between them.

In two of the accompanying illustrations Black Turnstones are to be seen with "Ruddies," and in their passage up and down the sands the birds grouped and regrouped irrespective of species. These particular birds, encountered on the 21st day of August, 1912, proved very susceptible to judicious approach. By slow advances or by show of indirection, I got within twenty or thirty feet of them several times. Several times, also, I stood motionless down shore and allowed them to feed up toward me, which they did with little hesitation. When pressed too closely, however, they retreated beyond the reach of the waves and stood in motionless expectancy. When at last the camerist pressed his suit too ardently, the Turnstones rose and took refuge with a distant flock of Marbled Godwits. And later, because they had no real cause for complaint, the Turnstones proved an important factor in lulling the fears of those timorous fowls.

Migrations are occasionally conducted across country, and the Turnstones in this event are fond of foraging in plowed fields. The birds are silent and intent only upon feeding. This they do by advancing slowly over the ground, gleaning from its surface and turning over the clods which lie in their path to search eagerly beneath. It is rather amusing to see a bird walk up to a clod bigger than itself and several times as heavy, insert its beak, and give an odd little bunt with an upward jerk which sends the clod rolling a foot or more. Sometimes a lump of earth, more firmly imbedded, offers resistance, in which case the bird will make another honest effort or pass on unconcerned.

In flight the Turnstones bunch closely at first, but afterwards scatter a little more widely, and wheel and turn after the manner of Killdeers in autumn. The chief impression is of flashing white, as they quarter before the sun, or as they settle again in some distant portion of the field with wings daintily uplifted.

BREAKFASTING

THE 2ND AND 4TH BIRDS, FROM THE LEFT, ARE "BLACKS"

Photo by Dickey

THE CRASH
BLACK TURNSTONES AT CORONADO BEACH

No. 263

Black Turnstone

A. O. U. No. 284. **Arenaria melanocephala** (Vigors).

Synonym.—Black-headed Turnstone.

Description.—*Adult in summer:* Color-pattern of plumage somewhat as in preceding, but without chestnut; whole head, neck, upper back, and breast brownish black, varied by sooty centers of feathers, glossed with greenish on crown and back, shading by white tips of feathers on breast into white of underparts; a white loral spot and some speckling of white on forehead, and on sides of head, neck and breast; lower back, rump, and upper tail-coverts white, the last-named with included central patch of black; wings and tail as in *A. i. morinella*. *Adults in winter:* Similar, but head, chest, and neck uniform sooty black. *Immature:* Like adult in winter, but head grayer and back with buffy edgings. Measurements (av. of 10 specimens from Alaska): length 242 (9.53); wing 146 (5.75); tail 63.9 (2.52); bill 23.1 (.91); tarsus 27 (1.06).

Recognition Marks.—Towhee to robin size; absence of rufous, with foreparts chiefly black, distinctive in summer; but requires careful discrimination from Surf-bird (*Aphriza virgata*), whose foreparts are chiefly dusky in winter plumage.

Nesting.—Does not breed in California. *Nest:* A mere depression in sand of seabeach. *Eggs:* Much as in *A. i. morinella*. Av. size 40.6 x 27.9 (1.60 x 1.10) (Read). *Season:* June; one brood.

General Range.—Breeds in western Alaska from the valley of the lower Yukon at least to Kotzebue Sound. Occurs casually (?) to Point Barrow and Wrangel Island. Winters south to coasts of Lower California.

Occurrence in California.—Common along the coast, and especially on exposed or rocky portions, during migrations. Less common in winter on mainland coasts, but fairly abundant on the Santa Barbara Islands. Non-breeding birds of casual occurrence or even local abundance in summer.

Authorities.—**Gambel** (*Strepsilas melanocephala*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 220 (San Pedro; Monterey); *Bowles and Howell*, Condor, vol. xiv., 1912, p. 11 (Santa Barbara; migr. dates); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 50.

SAVE DURING the nesting season, the Black Turnstone is as characteristic of the Santa Barbara Islands and of the barnacle-covered reefs off our Pacific shores as is the Black Oyster-catcher in June. The birds move in little companies, cheered by rattling, piping cries, *Kitur, kitur;* and they seem to prefer the lowest possible reaches of the rock above the actual wash-line of the waves, where they may be wetted by incessant spray. When hushed into silence and immobility by the approach of a stranger, the birds themselves appear like little else than bunches of seaweed or knobs of the somber reef; but when reassured as to the stranger's intent, they begin to stir about and chatter. Now and then one of them runs at his fellows with outstretched bill and neck, and a fine scuffle, or flight, ensues. When they take to wing, as they do by a common flock impulse, the transformation in appearance is a delight to the eye. Instead of a row of dull-colored clods, there appears a constant cyclorama of flashing whites, set off by variegating blacks.

Taken at Coronado SEVEN BLACK TURNSTONES *Photo by Dickey*

1343

In summer this species enjoys a rather more southerly distribution than *morinella*, being found as far south as Sitka. According to Nelson: "It breeds among the brackish pools on Saint Michaels Island, and is found scattered over the wet flats everywhere. It is one of the commonest birds of this locality, its sharp clear note breaking the silence wherever one turns his step among the pools and marshy places. It has a habit of circling round the intruder, during the nesting season, with a fine clear peeping cry like the syllables *weet, weet, too-weet*, as it moves restlessly about; now stopping a moment on a slight knoll, then running hastily along the edge of a neighboring pool, perhaps picking up a scrap of food as it runs, and then it mounts on wing again and comes careering about, evincing the liveliest distress at the invasion of its haunts."

The Black Turnstone is at no time so great a wanderer as its ruddy cousin. It does not frequent the interior nor does it go further south than Santa Margarita Island, in Lower California. While specimens may be found throughout the summer months, it is well known that these are non-breeding birds, senescents, or those which for individual reasons fail to make the northern flight. There is, thus, a fringe of local movement along the shores of the mainland at all times of the year; and the bird is one of the best-known figures of our coastal life. Rarely does it venture on the naked sands, and then only in company with more experienced Sandpipers—Sanderlings, Westerns, Ruddy Turnstones, and even Killdeers. When disturbed in such company, the Blacks will oftenest separate themselves and "haul out" upon the nearest rock, be it never so insignificant.

Taken near Santa Barbara *Photo by the Author*
THE BLACK TURNSTONE IS PREËMINENTLY A ROCK-HAUNTING SPECIES

No. 264

Frazar's Oyster-catcher

A. O. U. No. 286.1. **Hæmatopus palliatus frazari** Brewster.

Description.—*Adult:* Head and neck all around slaty black; chest black, spotted and tipped with white; sides of breast sooty black; lining of wings white, varied by dusky; remaining underparts pure white, or with some dusky spotting on lower tail-coverts; back and wings dark brown; the greater wing-coverts broadly tipped with white, and forming with some of the inner secondaries a heavy transverse bar; exposed primaries and tip of tail blackish; the upper tail-coverts laterally, and on their distal portions centrally, white. Bill vermilion; a red ring around eye; iris orange-yellow; feet and legs pale purplish flesh-color. *Immature:* Much like adult, but head brownish black, and brown of upperparts varied by buffy edgings. Measurements (of the two extant California specimens): length 450 (17.72); wing 270 (10.63); tail 102 (4.02); bill 77.5 (3.05); tarsus 57 (2.24).

Recognition Marks.—Crow size; black and white plumage with long red beak and island haunts distinctive.

Nesting.—Does not breed in California. *Nest:* A mere depression in shingle or gravel of upper beach, lined or not with bits of shell. *Eggs:* 2 or 3; ovate, pale olive-buff or rarely olive-buff, spotted or marked boldly and rather sparingly with brownish black and subdued under-shell markings of violet-gray. Av. size 52.3 x 37.6 (2.06 x 1.48); index 71. *Season:* May; one brood.

Range of *Hæmatopus palliatus.*—Coasts and adjacent islands of the Americas. Upon the east coasts from Virginia to Argentina and in the West Indies; on the west coasts from the northern borders of Mexico south to Chile.

Range of *H. p. frazari.*—Resident upon both coasts of Lower California and on the western coast of Mexico, with their adjacent islands.

Occurrence in California.—Formerly of regular occurrence, and breeding at least as far north as Santa Barbara Islands; now a "rare straggler from farther south during late summer" (Howell).

Authorities.—Baird, Brewer and Ridgway, Water Birds N. Amer., vol. i., 1884, p. 112 (San Diego and Santa Barbara Ids.); *Evermann,* Auk, vol. iii., 1886, p. 92 (Ventura Co.); *Cooke,* U. S. Dept. Agric., Biol. Surv. Bull., no. 35, 1910, p. 99 (distr.).

TO A STUDENT of world ornithology the phylogeny of the Oyster-catchers makes instant appeal, by reason of its simplicity and its clear-cut distinctions. There are two types of Oyster-catchers, the all-black and the black-and-white. That the distinction is as ancient as it is clear-cut goes without saying, for the black-and-white type has split up into nine different species, or races; while the all-blacks boast at least four forms entitled to specific rank. Together these 13 species occupy the major coasts of the world. But the significant thing is that the two types, necessarily evolved in widely sundered regions, now overlap each other through immense stretches of coast-line, notably in Australia, South America, and Africa. In three instances, at least, this overlapping

amounts to joint occupation of territory during the breeding season; and there are stations, for example, King Island, in Bass Strait, off the coast of Australia, where both species breed in indiscriminate proximity. And, lastly, there is occasion to believe that some hybrids have resulted from the association of these long-separated stocks.

The familiar species of the California coast is, of course, *H. bachmani*, an all-black type. *H. frazari*, resident on the coasts of Lower California, is a black-and-white, closely related to and perhaps only a subspecies of the dominant *H. palliatus*, of eastern North America, Mexico (both coasts), and South America. By reason of its conspicuous coloration, as well as its excessive noisiness, the Frazar Oyster-catcher has suffered a fatal prominence. Its former appearances on the Channel Islands (as far north as Ventura County) were concluded by an early martyrdom, and the species is rare even in its primitive fortresses on Los Coronados Islands.

Owing chiefly to unsettled political conditions, the ornithology of Baja California remains unwritten. Some few notes we have from early ornithological explorers. Thus, one by Walter E. Bryant written thirty years ago[1]: "I found this Oyster-catcher tolerably common at Magdalena Bay and northward, and on Santa Margarita Island they were mated in January. They were rather shy, running rapidly on the beach, and if approached, taking wing with loud, clear, whistling notes, and after flying some distance, alighting again at the water's edge. Their food was chiefly small bivalves found on the gravelly beach."

No. 265

Black Oystercatcher

A. O. U. No. 287. **Hæmatopus bachmani** Audubon.

Description.—*Adult:* Head and neck slaty black; remaining plumage sooty black, lightest (dark sooty brown) on back. Bill and eyelids vermilion; irides yellow; feet and legs pale old rose or flesh-color; nails black. *Immature:* Sooty black varied by rusty edging of feathers. Bill shorter, pointed, dusky. *Downy young:* Ashy gray, striped above with black. Length of adult about 444.5 (17.50); wing 254 (10.00); tail 114.3 (4.50); bill 76.2 (3.00); tarsus 57.2 (2.25).

Recognition Marks.—Crow size; uniform black plumage; vermilion beak.

Nesting.—*Nest:* A pint of rock-flakes, placed on rock or reef just above the tide-line. *Eggs:* 2 or 3; olive-buff of varying shade, spotted boldly but often sparingly with black and dark brown, with some imbedded markings of violet-gray. Av. of 17 eggs in the M. C. O. coll.: 56.1 x 38.9 (2.21 x 1.53); index 69.2. *Season:* c. June 1st; one brood.

[1]Proc. Calif. Acad. Sci., 2nd series, Vol. 2, 1889, pp. 275, 276.

Black Oyster-catcher

Adult and young, about ⅓ life size

Allan Brooks

General Range.—Pacific Coast of North America from Lower California north to the Aleutians; the Kurile Islands; breeding throughout most of its range, south at least to Los Coronados Islands; and wintering south from southern British Columbia.

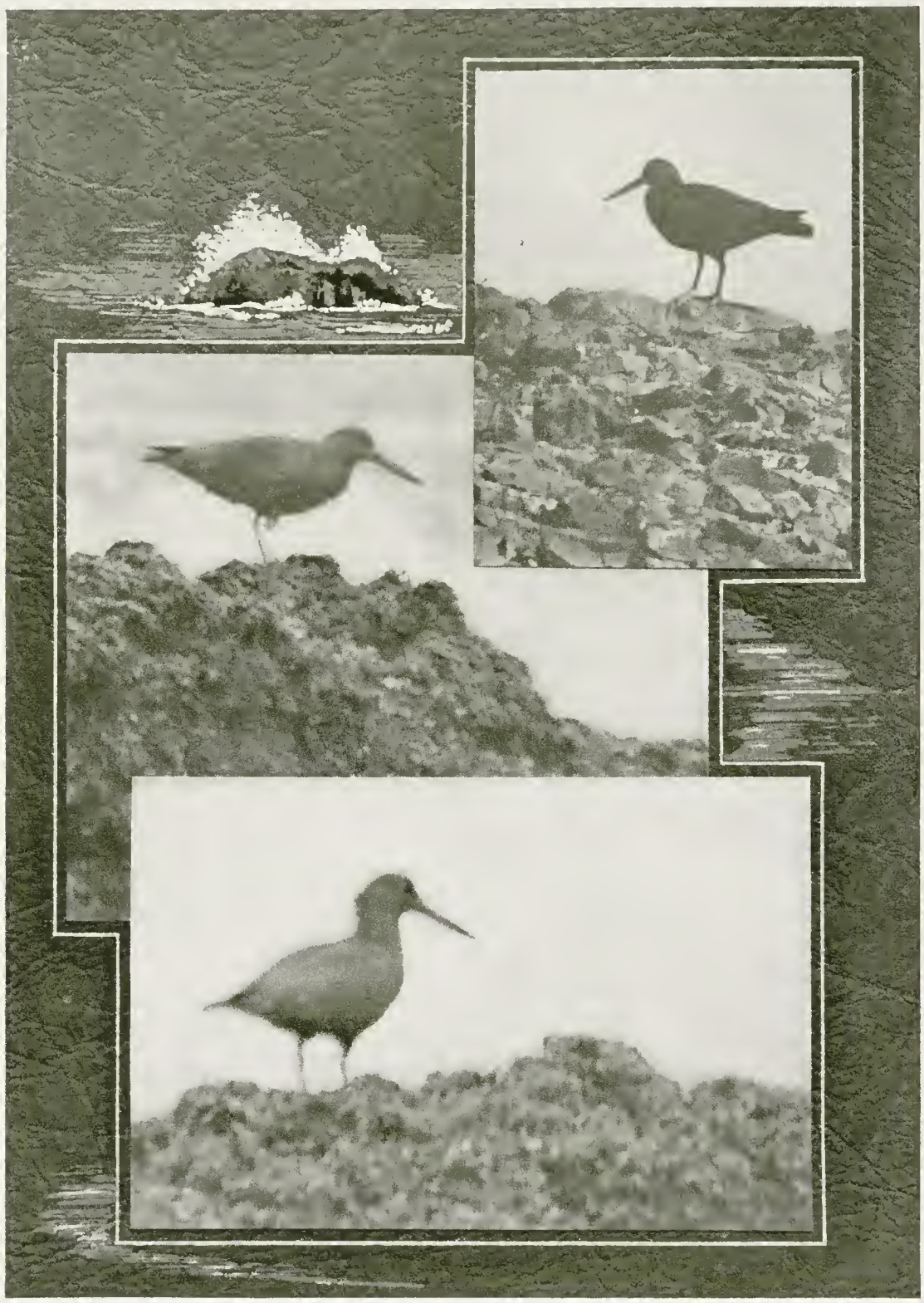
Distribution in California.—Fairly common resident on the coastal islands south to San Clemente; and common visitor to rocky or exposed portions of adjoining coasts.

Authorities.—Gambel (*Haematopus ater*), Jour. Acad. Nat. Sci. Phila., ser. 2; i., 1849, p. 221 (San Pedro); *Willett*, Condor, vol. xi., 1909, p. 186 (San Luis Obispo Co.; desc. nest, eggs, habits); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 51 (s. Calif. ids.).

PROSY hedgerows and quiet duck-ponds for such as like them; but roaring reefs and a pounding sea for the Black Oyster-catcher! And what more romantic spot to charm the eye and fire the imagination than a bird rock in the blue Pacific! The fog, it may be, shrouded the entire scene at daybreak, but as we launch out from the surf at nine o'clock, it is clearing away, and only stray wisps of mist cling about the battlements of the promised isle, a league offshore. As we approach, uneasy gulls and inquiring puffins pass near us overhead, the former drifting up as though casually, but quavering suspiciously; the latter including us upon the rim of great circles several times repeated, and checking their flight each time sufficiently to survey us with grave and careful curiosity. The cormorants begin to shift uneasily upon their nests, while disengaged members of their company join the increasing ranks of scouts. Marauders are not so little known that the approach of mysterious strangers can be regarded calmly.

But the official greeting of the motley host is extended by the Black Oyster-catcher, the self-constituted guardian of all sea-girt rocks. He has had his eye upon us from the moment of launching, and when we are within a hundred yards, mindful of his brooding mate or the secreted babies, he flies straight out to meet us and quavers a boisterous welcome, a welcome wherein anxiety is veiled by effusiveness. His effusiveness, moreover, is not unmingled with sarcasm, as who should say, "Good morning, gentlemen, good morning. Ah, you are officers of the law, I perceive, and armed with a search warrant. Quite proper, quite proper! Help yourselves, gentlemen. If I can be of any assistance to your worthy cause, command me."

And so the garrulous old marshal goes back shouting and chuckling. Once out of sight behind the rock, he repeats hurried instructions to his children to remain hidden in their crevices; then, ever mindful of appearances, he hurries forward again, beaming with virtuous importance, and vociferating shrilly, "No, gentlemen, there is nothing the matter. I have been clear around the island and there isn't a thief in sight. But help yourselves, gentlemen. Oh, yes, help yourselves. Doubtless *you* are experts."



BLACK OYSTER-CATCHERS

THE LOWEST BIRD PHOTOGRAPHED BY DICKEY ON ANACAPA ISLAND, THE UPPER TWO BY THE AUTHOR ON DESTRUCTION ISLAND, OFF THE COAST OF WASHINGTON

Anon, birdlums! We are very much occupied just now with the problem of landing. Our island is nearly surrounded by rocky shoulders which are covered only at highest tide, and upon one of these, on the lee side, we hope to disembark. Albeit there is little breeze, there is a heavy swell running, and the boatman sculls cautiously as we draw near. Just as we prepare to leap ashore with the cameras we are swiftly upborne by

Taken near Pizmo *Photo by the Author*

AN ISLAND FORTRESS

a quartering sea. "Look out!" the oarsman cries sharply, and we crouch in terror as the dory seems about to be dashed in pieces upon the flooded reef. But the boat just clears in the recoil and we go down, down, while a swift pageant of mussels, barnacles, sea-urchins, and bright-hued anemones shoots past us, sputtering and choking at the sudden exposure to air. When we do effect a landing, we must scuttle for safety before the next wave reaches, with a dull chug of satisfaction, our recent landing place.

The lower levels of the bird-rock are sacred to the Oyster-catchers, and these engage our attention at once. Very diverting creatures they are at any time, but never more so than at close quarters. As large as domestic fowls, with sooty black plumage, they are provided with stout feet and legs of a pale flesh-color, and a strong chisel-shaped bill of a bright vermilion hue. The yellow eyes are surrounded by rings of carmine, which impart a droll appearance to these wags in feathers; and in the midst of most earnest floods of bombast, they cannot forbear tipping you sly winks, like auctioneers.

Now and then one will alight quite near and stand for a moment

looking very big and bold. Then he will draw his head in and settle his body lower on the legs and sneak off, glancing furtively over his shoulder to see if his movements are being shadowed. Without question he is trying to develop the kind and degree of our interest. If the female was sitting upon eggs she slipped away too soon to be caught at home, and she spends the entire time of our stay arranging elaborate pantomines for our misguidance. Now she bends with quivering wing and dips her head up and down, as though inviting attention to her charming nestlings. "Ar'n't they darlings?" (She means a heap of mussel shells just before her eyes). Or again she settles down upon a barnacle-covered rock and broods virtuously—on barnacles.

And if, by any accident, one does become possessed of the real secret, it is great sport to devise a stealthy return and to watch the bird steal away from the eggs, slowly, painfully, in abject humiliation, hoping against hope that she is eluding observation, until a safe distance is reached. When the game is "all off" the birds cause the rocks to resound with their strident cries, and if there are neighbors, these join forces with the immediately besieged ones until our ears ache.

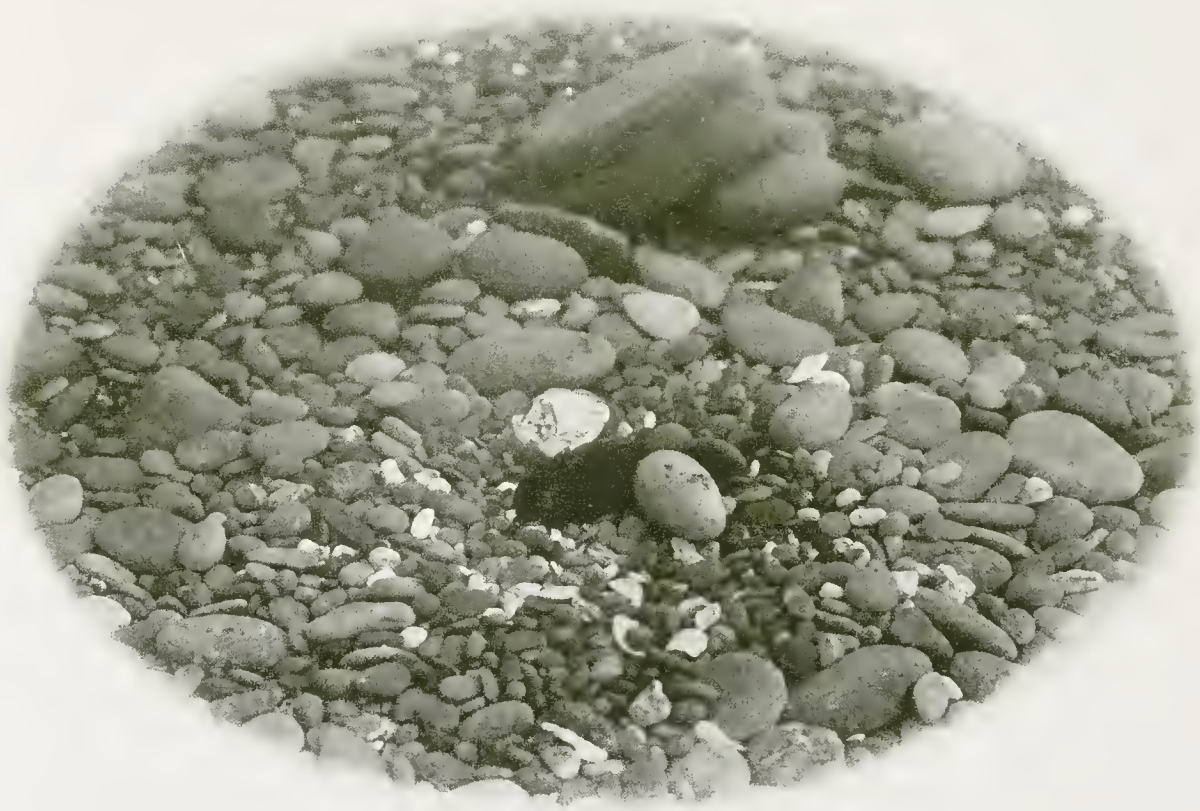


Photo by the Author

A HARD CRADLE
NEST OF BLACK OYSTERCATCHER ON DESTRUCTION ISLAND

Left to themselves, the birds are no Quakers, and the antics of courtship are both noisy and amusing. A certain duet, especially, consists of a series of awkward bowings and bendings, in which the neck is stretched to the utmost and arched over stiffly into a pose as grotesque as one of Cruikshank's drawings,—the whole to an accompaniment of amorous clucks and wails.

The eggs of the Black Oyster-catcher, normally three in number, are oftenest placed in the hollow of a bare rock, lined with a pint or so of rock-flakes, laboriously gathered.

Taken in Washington *Photo by the Author*

YOUNG OYSTERCATCHER, HIDING

In default, apparently, of suitable stone-chips, the bird will utilize bits of shell, rounded pebbles, or, still more exceptionally, grass. The use of pebbles serves to connect, in thought at least, the chip-lined nests with those instances, comparatively few in number, where the eggs are deposited upon unmodified beach gravel. One who has seen the Oyster-catcher's eggs lying in coarse gravel, where to the protective coloration, stone-gray with black spots and blotches, is added the almost perfect assimilation of form to that of rounded pebbles, cannot escape the conclusion that this is the typical, or ancestral, situation. That the Oyster-catchers now resort to the upper reaches of barren reefs, or to the exposed shoulders of the more ambitious rocks, may be due to intervening geological changes, resulting in a relative scarcity of suitable beaches; or it may be due to the increase

of mammal depredations, as of seals hauling out. Whatever may have induced the change in habit, it is certain that as often as the annual reproductive cycle comes around, the Black Oyster-catcher is impelled to provide for herself a hard bed, which in its essentials serves to recall the harsh setting of the ancestral beach. Thus, on a single island we have seen a beach nest, a nest which consisted of a quart of rounded pebbles culled from the same beach but carried a hundred yards or so to a bare rock twenty feet above tide, and a flake-nest consisting exclusively of sandstone chips. Another nest in our collection, taken from a rocky shoulder some ninety feet above tide, comprises only angular fragments of sandstone.

Needless to say, these Spartan cradles are not considerate of their contents. Dented eggs are common in the nests, and many an unhatched *Hæmatopus* goes rolling over the steeps. But these chosen dangers are a bagatelle in comparison with the depredations of the Raven. Little escapes his sinister eye, and an egg once marked is doomed. Ravens abound on the Santa Barbara Islands, and if it were not for them we should have, perhaps, ten times our present population of Oyster-catchers.

A young Oyster-catcher is a master at freezing, and his case is helped somewhat by rusty feather-edgings, which enable him to blend with the surroundings. When warned, he flattens to the rock with outstretched neck and bill, and nothing but the parental permission or the hand of the discoverer will absolve him from his fakir vow. That the appearance of the fledgling is not devoid of interest is testified by L. M. Turner, who says in his "Contributions to the Natural History of Alaska": "I once procured a less than half-grown bird of this species, and if any one would like to have one it can be gotten up in the following manner: Take the hinder half of a black kitten, dip about four inches of its tail in red paint, then fasten to the legs a piece of tallow candle about four inches long, jab the wick end of the candle down hard on the floor to spread it out for feet. Stand it up and heave a boot-jack at it to give the desired animation, and a good representation of a young Black Oyster-catcher will be produced, for a more comical object than a toddling Oyster-catcher is difficult to conceive."

The name Oyster-catcher is, of course, a misnomer. Oysters are not much given to sprinting anyway, and this bird is not at all interested in their ambulatorial powers; for he does not frequent sand-beaches, mud-flats, or oyster-beds. Even when visiting the mainland shore, which is not often, the bird confines its attention to the barnacle-covered rocks and high-lying mussel-beds. Its food consists of marine worms and crustaceans of various sorts, barnacles, limpets, and especially mussels. Its stout, chisel-shaped beak enables it to force an entrance into the most refractory

A Breeding Haunt of the Black Oystercatcher

From a photograph by the Author

Taken near Trinidad

mussel-shell, and to sever as by a knife the strong abductor muscles, which hold the valves together. Its feet, also, are large and strong, and the toes are provided with an elaborate set of pectinations which enable the bird to maintain a footing upon the most slippery rocks. If the foothold on a sloping rock is anywise precarious, the bird retreats backward and uphill by means of these convenient calks.

There is no migratory movement, so far as we are aware, among our California breeding birds. There may be some accession to their numbers in winter because of a partial retreat of Alaskan birds, but how extensive this movement may be we have no means of ascertaining. The birds are no longer found upon the Farallons, or, more strictly, the Southeast Farallon, and there is a noticeable scarcity of them on the islands of Humboldt and Del Norte counties, due, no doubt, to human persecution rather than to any lack of local attractions.

No. 266

South American Skua

Catharacta chilensis (Saunders).

Synonyms.—Chilean Skua. Southern Skua. Sea-hawk.

Description of *Catharacta skua* Brünnich.—*Adult:* "Head and nape umber-brown; neck rather paler, the acuminate feathers streaked with yellowish brown, ruddier at the junction with the back, which is more or less streaked with rufous; wing-surface darker brown; primaries chiefly umber, the exposed basal portion of the inner webs white, forming a band which is very conspicuous when the bird is flying; quill-shafts chiefly white; tail-coverts brown streaked with dull rufous; rectrices umber; under surface up to the throat pale chestnut brown; under wing-coverts dark brown with a little rufous at times; bill black, the cere with a grayish tinge; iris dark brown; tarsi and toes black" (H. Saunders). A *melanotic* phase also occurs in which the back, wings, and exposed portions of tail are sooty black, and the remaining plumage nearly uniform sooty brown; the white patch on primaries, as before. *Immature birds* are very much like adults, but they are noticeably smaller; the sharpening as well as striation of the neck-feathers is less pronounced; and their coloration in general is duller and more blended. Length 508-558.8 (20.00-22.00); wing 393.7-406.4 (15.00-16.00); tail 152.4 (6.00); bill 57.2 (2.25); tarsus 68.6 (2.70).

Description of *C. chilensis.—Adult:* "Similar to the preceding species [*C. skua*] but much brighter in coloration. Forehead, crown, and occiput dark brown, hind neck brown with narrow whitish streaks, and mottled with chestnut; feathers of the mantle brown with bright chestnut central streaks; upper tail-coverts chiefly chestnut, with brown mottlings; rectrices dark brown; wings dark brown with white visible at the bases of the four outer pairs of quills, and more conspicuous on the under side; chin, throat, under neck, breast and abdomen warm chestnut; under wings, axillaries, and under tail-coverts chiefly chestnut, mottled with brown; bill reddish black; tarsi black often mottled with yellowish; toes black. Total length 21 inches [533 mm]; culmen 2.3 [58.4]; wing 15.5 [393.7]; tail 6.5 [165.1]; tarsus 2.75 [69.85]; middle toe with claw 2.8 [71.1]" (Saunders).

The two specimens in the Berkeley Museum (viz., #17758 and #17759), upon which the California record in part rests, were taken in the early fall of 1910, and are both of the melanotic phase. Their measurements, wing 368.3 and 381 (14.50 and 15.00); culmen 44.5 and 47 (1.75 and 1.85); tarsi 59.7 and 59.2 (2.35 and 2.33), would further indicate them to be immature. Both on this account and because of their melanism it is impossible to discriminate as between *C. skua* and *C. chilensis*.

Recognition Marks.—Gull size and shape; dark plumage varied by rufous; black bill and feet. Any very dark gull-like bird appearing off our shores, especially if engaged in pursuing other gulls, should be carefully scrutinized, as this Skua is probably not as rare as the few specimens would indicate.

Nesting of *C. skua.*—*Nest:* On the ground, a mere depression in moss or else lined with grasses and moss. *Eggs:* 2; dark olive-buff or buffy brown, sparingly spotted or blotched with brownish olive, sepia, or, rarely, black, and dull violet-gray. Av. size 71.1 x 48.3 (2.80 x 1.90). *Season:* June.

General Range of *C. chilensis.*—The coasts of southern South America north to southern Brazil and Peru.

Occurrence in California.—An occasional visitor from the South. Three specimens taken by Beck off Monterey (Aug. 7, 1907; Aug. 4 and Sept. 21, 1910). Other "sight records" probably correct.

Authorities.—Lawrence (*Stercorarius catarractes*), Ann. Lyc. Nat. Hist. New York, vol. vi., 1853, p. 7 (coast of Calif., "off Monterey"); *Beck*, Proc. Calif. Acad. Sci., 4th ser., iii., 1910, p. 61 (Monterey Bay); *Bent*, Condor, vol. xxiii., 1921, p. 78 (status of Pacific Coast birds); *ibid.*, U. S. Nat. Mus., Bull. no. 113, 1921, p. 7 (distr.; status).

LAWRENCE'S record, published in 1853, of the taking of a Skua "off the coast of California, near Monterey," was probably a good one, but it was regarded with suspicion by timid closeteers until Rollo H. Beck, prince of pelagic collectors, reestablished its presumptive value by the capture of a specimen in Monterey Bay on the 7th of August, 1907. Two others, now in the Museum of Vertebrate Zoology, were taken by the same collector on August 4th and September 21st, 1910. The riddle was not resolved, however, until Mr. Bent's investigations[1], following Ridgway's suggestion[2], made it clear to us that the species represented was not *Catharacta skua* of the northern Atlantic, concerning which science was, naturally, so skeptical, but *C. chilensis* of the western coast of South America. Stanton Warburton, Jr., of Tacoma, took three specimens off the coast of Washington and Vancouver Island, on June 28th and 30th, 1917; and it is altogether probable that the South American Skua is a not infrequent wanderer along our entire coast line.

Bloodthirsty, ruthless, and terrible is this marauder of the seas, who not only pursues other gulls or Procellarids and obliges them to disgorge their finny prey, but feasts upon their eggs and young as well. Nothing

[1] A. C. Bent in "The Condor," Vol. XXIII., May, 1921, pp. 78-80.
[2] Robert Ridgway, "Birds of North and Middle America," part 8, 1919, p. 678.

that is succulent and weak or unwary or killable comes amiss to this blackamoor, especially at the time of year when his own young are clamoring for food. That he is brave enough none can deny, and for a man to attempt to rob his nest is a really risky piece of business. Fortunately, such unsocial graces are self-destructive. Of McCormick's Skua, a closely related species from the Antarctic, it is said that the race would perish through the speedy extermination of their customary victims, the penguins, except for the fratricidal strife which exists among themselves. Not only do they rob each other of eggs and young, but their own chicks, never more than two in number, fight each other to the death in the cradle; or else, filled with bitter humors, go wandering off to be gobbled up by hungry neighbors.

No. 267

Pomarine Jaeger

A. O. U. No. 36. **Stercorarius pomarinus** (Temminck).

Synonyms.—Pomatorhine Jaeger. Pomarine Skua. Gull-hunter.

Description.—*Adult, light phase:* Top and sides of head, upperparts (except back of neck), and crissum brownish slate or dusky; rest of head and neck and underparts white; the region of ear-coverts and around on hind-neck tinged with straw-yellow; primaries extensively white on inner webs, their shafts straw-yellow; central feathers of tail projecting three or four inches beyond most of the others, their breadth sustained to their abruptly rounded tips, which are twisted so that the lower surfaces of the two feathers are brought face to face. Bill horn-color, tipped with black; feet and legs black. *Adult, dark phase:* Entirely brownish slate, except sides of head and hind-neck often tinged with straw-yellow, as before. *Young, light phase:* Upperparts brownish dusky, the feathers of the back sparingly tipped with whitish or pale cinnamon-rufous; those of the rump and upper tail-coverts spotted and barred with the same; head, neck, and underparts white, everywhere (very sparingly on belly) streaked or barred with dusky and pale cinnamon. *Young, dark phase:* Entirely brownish slate, the underparts more or less barred with whitish or dull buffy. In the young of the year the central tail-feathers do not project beyond the others more than half an inch or such a matter. The light and dark phases described above do not represent actual dichromatism, such as exists in the case of the Screech Owl, but only extremes of coloration within which every intermediate condition may be found. The commonest form is one in which the chest is sparingly, and the sides of the breast, hind-neck, and sides are heavily barred with dusky and buffy. Length 558.8 (22.00); wing 349.3 (13.75); tail 209.6 (8.25); bill 39.4 (1.55); tarsus 53.3 (2.10).

Recognition Marks.—Large crow size (size of California Gull); uniform dusky, or dusky-and-white coloration; central pair of tail-feathers elongated, *not* tapering, apparently set at right angles to the other feathers; bill rather small for size, sharply hooked, and provided with thin "cere." Predatory in habit; oftenest found harassing other birds of same family.

Nesting.—Does not breed in California. *Nest:* On the ground, of grass and moss. *Eggs:* 2 or 3; pale olive-green or deep olive-drab, sparingly spotted with slate color and two shades of umber, chiefly at the larger end, where they become confluent (Brewer). Av. size 66 x 47 (2.60 x 1.85).

General Range.—Chiefly northern part of Northern Hemisphere. Breeds in high Arctic latitudes (north at least to Latitude 83); migrates chiefly coastwise, and winters south to Galapagos, Peru, Africa, and Australia.

Occurrence in California.—"Common fall migrant coastwise * * * * Occurs off 'Point Pinos in every month of the year' (Beck) though only common during August to October" (Grinnell).

Authorities.—**W. E. Bryant** (*Stercorarius pomarinus*), Proc. Calif. Acad. Sci., ser. 2, ii., 1889, p. 87 (San Francisco); *J. Mailliard*, Condor, vol. vi., 1904, p. 15 (San Francisco Bay); *Beck*, Proc. Calif. Acad. Sci., 4th ser., iii., 1910, p. 61 (off Point Pinos); *Cooke*, U. S. Dept. Agric., Bull. no. 292, 1915, p. 7, map (distr., migr.); *Bent*, U. S. Nat. Mus. Bull. no. 113, 1921, p. 7 (life hist.; desc. nest and eggs, etc.).

FISHER-FOLK, because of their exposed situation, have ever been at the mercy of pirates and free-booters; and the same rule obtains in the bird-world as among men. The Bald Eagle stands ready to relieve the Fish Hawk of his hardly-won prey, and the Man-o'-war-bird sweeps the southern main on a perpetual quest for fish-laden Gannets and Pelicans. In the northern waters the gentlemen of the sea are the Jaegers—hunters. Here upon wings marvelously swift and cruelly graceful, the little corsairs hurry to an fro to observe which of their fisher-friends has made a catch, and to make instant requisition of it. It may even be a Glaucous Gull that has just swallowed a herring, and if detected in the act the Gull moves off screaming, while the little bully darts at him repeatedly, and prods and browbeats him until he is glad to disgorge for the sake of being rid of his persecutor.

The Kittiwake Gull is the acknowledged thrall of this rapacious viking, and if his eggs or callow young escape the devouring beak, it is only that they may henceforth share the spoils of the sea with their merciless master. Bullies are also cowards, and it pleases us to learn that this larger species stands in awe of its lesser kinsmen, the Parasitic, and the Long-tailed Jaeger, and that it has to submit to a drubbing now and then at the hands of one or another of these peppery assailants.

Jaegers follow their victims southward in the fall, and in their movements and abundance bear pretty constant relation to those of the Terns. Beck says that they may be found off Point Pinos every month in the year, but that they are really common only during the fall migrations. It is pretty certain also that they winter to some extent all along our southern coast, but we are not able to pronounce upon their abundance relative to that of the following species.

No. 268

Parasitic Jaeger

A. O. U. No. 37. **Stercorarius parasiticus** (Linnæus).

Synonyms.—Richardson's Jaeger. Marlinspike. Gull-hunter.

Description.—Somewhat similar to preceding species, both in general appearance of plumage and in color phases, the near-adult and common form being merely *washed* with brownish on sides of breast and across throat, instead of brown-spotted-and-barred. *Adult, light phase:* Upperparts, lining of wings, sides, flanks, and crissum, grayish sooty brown, blackening on greater coverts, primary coverts, quills, and tail distally, interrupted on hind-neck and cervix by white continuous with underparts, paling on forehead and changing to white at extreme base of bill; remaining underparts, continuous with broad cervical collar, white, tinged on cheeks, sides of neck, and nape with straw-yellow; primaries whitening on concealed portions of inner webs, their shafts straw-yellow. Bill and cere brownish, blackening on tip; feet and legs black. *Adult, dark phase:* Entire plumage sooty brownish black, a little paler below (where lighter than in *S. pomarinus*). *Immature birds* are smaller, with central tail-feathers not, or scarcely, projecting, and have chiefly nebulated plumage below, with admixture of pale cinnamon, especially on under tail-coverts, where coarsely barred; the cheeks and neck all around dusky, streaked with whitish and cinnamon-ochraceous. Maturing birds show increasing white, i. e., are more sparingly dusky-streaked or barred below, and in the last stage are merely tinged on throat, nape, and sides of breast with blended dusky. Owing to the habitual cross-breeding of the light and dark phases, the resultant varieties are interminable and their plumage changes hard to follow. Some examples, presumably juvenal of the dark phase, are even heavily washed and skirted with ochraceous-tawny or clay-color—containing a hint of erythrism. In a considerable series of these birds there will be no two specimens alike; but the type showing some degree of nebulated under-plumage will prevail. If all birds were as variable as these, the task of the plumographer would be hopeless. Length 381-533.4 (15.00-21.00); av. 431.8 (17.00); wing 330.2 (13.00); tail 190.5 (7.50); bill 30.5 (1.20); tarsus 45.7 (1.80).

Recognition Marks.—Crow size, but appearing larger; marks much as in preceding species, but *central pair of tail-feathers sharply pointed*, produced about three inches beyond others (not nearly so long as the Long-tailed Jaeger (*S. longicaudus*).

Nesting.—Does not breed in California. *Nest:* A depression in moss. *Eggs:* 2; light brownish olive to buffy brown, spotted rather sparingly with dark sepia, dark bister, or black, and dull violet-gray. Av. size 58.4 x 41.9 (2.30 x 1.65). *Season:* June.

General Range.—Breeds in high northern latitudes from at least Lat. 81° 40′ south to the Aleutians, central Mackenzie (Great Slave Lake), and Scotland. Winters from the Aleutian Islands, New England, and the coasts of Europe south to Chile, Brazil, Cape of Good Hope, and Australian seas. Many interior records, especially upon the Great Lakes.

Occurrence in California.—Fairly common migrant, coastwise. Found sparingly in winter south of Pt. Conception.

Authorities.—Cooper (*Stercorarius parasiticus*), Proc. Calif. Acad. Sci., vol. v., 1874, p. 415 (San Francisco Co.); *Henshaw*, Auk, vol. ii., 1885, p. 232 (Santa Barbara, etc.); *Evermann*, Auk, vol. iii., 1886, p. 88 (San Buenaventura); *Grinnell*, Pac. Coast Avifauna, no. 1, 1900, p. 8 (Cape Blossom, Alaska; desc. nest and eggs, etc.).

PARASITIC JAEGER

HARD upon the migrating hosts of Terns come these cruel tyrants of the sea, the Jaegers. Despicable in that they have turned traitor to their own kind, and in that they harass the least as well as the greatest of that kind, they nevertheless provoke admiration and astonishment by their gracefulness, their skillfulness, and their saucy bravado. Every line in the Jaeger's make-up is cut for speed. Once its gleaming, covetous eye is cast upon a victim, it is no question of escape, but only a matter of detail in the terms of capitulation.

A tern catches a herring, and while it is disposing of its catch, the free-booter hurries up and dives at the tern suggestively. The Jaeger makes no attempt to snatch the fish, but it dives under its victim, jostling it each time, and forcing it up into the air. The tern twists this way and that, screaming protestingly, but anon drops the fish, which the Jaeger snatches deftly in mid-air. Not content with this ransom, which is instantly bolted, the bandit demands to know whether the victim has any more fish secreted about his person, and harries the hapless wight until the contents of the crop are disgorged, or, if already empty, until the victim clearly establishes his poverty.

Jaegers frequently hunt in pairs, and when so fortified are able to successfully handle much larger subjects. A Glaucous-winged Gull could nearly eat a Jaeger alive, if he could only get at him. But the parasites are too adroit, too elusive, and too desperately persistent. The gull hates to do it, but also he hates to be buffeted and hustled away from the fishing-grounds: "Here, take it, you scum, and be off with you!"

Jaegers, both of this and of the preceding species, pass along our coasts in considerable numbers in late April and early May and again in September. They do not, of course, move in flocks like terns, for no territory could support such wholesale brigandage; but at the height of the season one may see a score of birds, in steaming from San Pedro to Avalon, or from Santa Barbara to Santa Cruz Island. The season of 1914 was a late one in California. At Santa Barbara both sorts of Jaegers and four kinds of terns were found on the 14th of November. Doubtless many of these lesser pirates winter hereabouts, for they do not go much further south. The Jaegers are not entirely dependent upon forced charity, for they devour offal on shore, or glean tidbits from the surface of the water, quite after the fashion of other gulls. Upon discovering a morsel below, the Jaeger checks its flight suddenly, with a display of the characteristic tail-feathers which is quite gratifying to the watchful student; and it settles daintily upon the water to investigate at leisure or to snatch and rise with perfect grace. In its northern home, the lowlands and coastal marshes of Alaska, it is said to hunt a great deal inshore, where it catches shrew-mice, lemmings, and even small

birds. It is also very fond of eggs, and destroys great numbers of them in the course of a season, not only those of kittiwakes and murres, but of ducks and snipe as well. On cloudy days or in the Arctic twilight preceding the time of departure for the South, these birds are said to utter doleful wailing cries, interspersed with harsh shrieks; and these are among the most characteristic sounds to be heard in the teeming, tragic North.

No. 269

Long-tailed Jaeger

A. O. U. No. 38. **Stercorarius longicaudus** Vieillot.

Synonyms.—Arctic Jaeger. Buffon's Jaeger. Teaser. Boatswain. Marlinspike. Gull-chaser.

Description.—*Adult:* Top of head, including eyes and lores, black, the fibrillæ of occipital feathers parted; remainder of head, neck all around and breast white, tinged on sides of head and on neck all around with straw-yellow; remaining plumage slaty, shading on cervix, sides, and belly, blackening on exposed wing-quills and tail, definitely black on exposed tips of greater wing-coverts; the shafts of the quills white or straw-yellow, as in other species; primaries and tail with some basal white on webs; central pair of tail-feathers normally greatly produced, 6 to 10 inches beyond lateral feathers. Bill dusky, blackening on tip; tarsi leaden blue; tibiæ and feet black. There is also a melanotic phase wherein the entire plumage becomes slaty or sooty, as in other species of Jaegers, but this is very rare, almost negligible. *Young birds* differ materially from the adult, being smaller, darker, and more varied in plumage, and with the central pair of tail-feathers not at all, or only slightly, projecting. A typical example, male of the 2nd (?) year, has head and neck all around streaked dusky and dull buffy; cervix and remaining under-plumage throughout mottled and barred with same colors, clearing to white on breast centrally, buffy strengthening on under tail-coverts, where black-white-and-buff-banded, buffy wanting in black-and-white-barring of under wing-coverts and axillars; remaining upperparts sooty black, heavily margined with fulvous on back and wings; black-white-and-cinnamon-buffy-barred on upper tail-coverts; blackening on wing-quills and rectrices, as before. Length of adult 508-609.6 (20.00-24.00), of which the tail 254-406.4 (10.00-16.00), the lateral tail feathers about 158.75 (6.25); wing 304.8-330.2 (12.00-13.00); bill 27.4 (1.08); tarsus 44 (1.73).

Recognition Marks.—Small crow size; smaller in body than the Parasitic Jaeger; the greatly lengthened and tapering central pair of tail-feathers distinctive.

Nesting.—Does not breed in California. *Nest:* A depression in moss or heather. *Eggs:* 2; dark olive-buff, marked with light brownish olive to black and dull violet-gray. Av. size 52.8 x 36.8 (2.08 x 1.45). *Season:* June.

General Range.—Northern portions of Northern Hemisphere. Breeds in the highest latitudes south to the Arctic shore of the American Continent and Siberia. Sparingly and irregularly south in winter to coasts of California, Florida (one record), Italy, and Japan.

Occurrence in California.—A rare migrant coastwise, so far recorded only in autumn.

Authorities.—Loomis (*Stercorarius longicaudus*), Proc. Calif. Acad. Sci., ser. 2, v., 1895, p. 213 (Monterey); *Bishop*, Condor, vol. vii., 1905, p. 141 (Pacific Beach, San Diego Co.); *Grinnell*, Pac. Coast Avifauna, no. 1, 1900, p. 8 (Kotzebue Sound, Alaska; desc. nest, eggs, habits, food, etc.); *ibid.*, Pac. Coast Avifauna, no. 11, 1915, p. 20 (Monterey).

THIS, the smallest, as well as the most active and graceful of the Jaegers, appears to be more of a stay-at-home than any of its fellows. At least it does not come so far south in winter, having been only twice recorded from California; once by Loomis at Monterey, and once by Marsden at Pacific Beach, in San Diego County.

The Long-tailed Jaegers are the first of their kind to revisit the northern tundras when spring has forced winter's lock. On such occasions they dash about like excited schoolboys, chasing their fellows in mock pursuit, or relieving their feelings by shrill cries. The selection of a mate is a noisy as well as momentous affair, but once accomplished, the pair retires to some lonesome spot of the tundra, where two elongated dark eggs of an olive-green hue, marked with blackish, are laid in a cup-shaped depression lined with moss. The parent birds are skilled in ruse rather than in defense, and in progressive paroxysms rehearse the agonies of mortal wounds so as to deceive the very elect—the while the nest is being left behind.

Although as skilled as any of their kind in exacting fishing toll of gull or tern, these furtive mischiefs have bad consciences, insomuch that they make a poor fist of robbing birds' nests. Curlews, terns, tiny sandpipers even, exalted by the righteousness of their cause, can drive these cowards out of bounds. When courage fails, therefore, they will descend to lemmings, insects, offal,—berries even. A full crop restores confidence, and our hero of many inconsistencies settles on the highest hummock which the neighborhood affords, cocks his head back, thrusts out his gleaming white breast, and poses as an amiable landmark, till digestion and cupidity urge a repetition of the endless round.

No. 270

Pacific Kittiwake

A. O. U. No. 40. **Rissa tridactyla pollicaris** Ridgway.

Synonym.—Kittiwake Gull.

Description.—*Adult in summer:* General plumage pure white, the mantle deep pearl-gray; five or sometimes six outer primaries with terminal portion black, the breadth of black area on first primary about three inches, decreasing to .85 in the

fifth; the first black on the outer web also; the fourth and fifth narrowly tipped with white; the black on the sixth appearing, if at all, as two rounded spots. Bill light yellow clouded with olivaceous; legs and feet blackish; the hind toe distinctly developed but minute; iris reddish brown; eye-ring red. *Adult in winter:* Similar, but sides of head and hind-neck overlaid with dark gray or plumbeous, and with plumbeous-slate around eye, most sharply in front. *Immature:* Terminal portion of tail, and exposed portion of primaries exhibited by folded wing black, the four outer primaries extensively white on inner webs, the color encroaching upon outer web and upon tip of the 5th, black vanishing with subterminal bar on 6th; a long black patch formed by bastard wing, lesser and median wing-coverts, and portion of secondaries; a broad cervical collar of black, and dabs of the same behind auriculars, sometimes continuous across fore-nape; some black smearing about eye. Bill black. Length of adult: 406.4-444.5 (16.00-17.50); wing 304.8-330.2 (12.00-13.00); tail 121.9 (4.80); bill 34.3 (1.35); tarsus 34.3 (1.35).

Recognition Marks.—Crow size; blackish feet of adult; solid black of extreme wing tip; black less extensive than in *Larus delawarensis*.

Nesting.—Does not breed in California. *Nest:* On ledges of rocky cliffs; of grass, moss, and seaweed. *Eggs:* 3; olive-buff (of varying tone, but averaging lighter than "normal gull type"), with spots and blotches of chocolate-brown and violet-gray. Av. size 57.4 x 40.9 (2.26 x 1.61). *Season:* June.

Range of *Rissa tridactyla*.—Breeds along the coasts of Arctic and sub-Arctic regions south to the Aleutians and the Gulf of St. Lawrence and southern France. Winters from the southern portions of its breeding range south irregularly to the Canaries, Bermuda, and Lower California.

Range of *R. t. pollicaris*.—Breeding on islands and shores of Bering Sea and adjacent portions of the Arctic and northern Pacific Oceans. Retires in winter to lower portions of breeding range or sparingly and irregularly to Japan and Lower California.

Occurrence in California.—Not common and very irregular winter visitant along coast and in harbors. Sporadically abundant. Casual inland.

Authorities.—Cooper (*Rissa kotzebuei*), Proc. Calif. Acad. Sci., vol. iv., 1868, p. 10 (San Francisco Bay); *Loomis*, Proc. Calif. Acad. Sci., ser. 2, vi., 1896, p. 21 (Monterey); *Anthony*, Auk, vol. xv., 1898, p. 267 (San Diego).

THIS HARDY gull is one of the most abundant and best distributed of birds in Alaskan waters, but its winter recession is very irregular, and is doubtless determined altogether by special weather or food conditions in the North. The species has been described as common during certain winters as far south as Monterey, and is held to be a regular winter visitant in small numbers south to the Coronado Islands. Nevertheless, its occurrence south of Monterey is always worthy of remark, and throughout certain seasons it is all but wanting. I have seen it only once at Santa Barbara.

Of their occurrence in Alaska Mr. E. W. Nelson says: "They pursue their prey in the same graceful manner as the terns, by hovering over the water and plunging down head-foremost. It is an extremely

interesting sight to watch a large flock passing over calm water in this manner. They are limited strictly to tide-water and rarely ascend even the Yukon delta over a few miles.

"Throughout its range this species has considerable curiosity and comes circling about any strange intruder to its haunts. In the bay at Saint Michaels they were frequently seen following a school of white whales, evidently to secure such fragments of fish or other food as the whales dropped in the water. It is curious to note how well the birds timed the whales and anticipated their appearance as the latter came up to blow."

Dr. Joseph Grinnell found the Pacific Kittiwake breeding extensively on Chamisso Island in Kotzebue Sound, and he says[1]: "On July 9th (1899) the eggs were well advanced in incubation. I saw no nests containing more than two eggs, and many nests held but one. The nests consisted of a wet, muddy mass of decaying grasses, adhering to narrow ledges and projecting points of rocks, frequently so limited in extent as to make it appear as though the nest were stuck to the face of the cliff like a Barn Swallow's. The neatly-moulded saucer-shaped nest-cavity was lined with grasses. As I was let slowly down the face of the cliff at the end of a rope, the sitting Kittiwakes beneath me would allow me to approach very closely before launching from the nests. They would leave with a few peculiar shrill cries, and hover about me or soar back and forth along the cliff, while the ever circling files and swarms of murres and puffins out over the water, was enough to bewilder one. I found the Kittiwakes' nests built in colonies, that is, there would be as many as a dozen built close together, lined along a narrow ledge."

No. 271

Glaucous Gull

A. O. U. No. 42. **Larus hyperboreus** Gunnerus.

Synonyms.—Burgomaster. Point Barrow Gull.

Description.—*Adult in summer:* Mantle pale pearl-gray; remaining plumage pure white; primaries entirely white or pale gray basally fading into white on tips, their shafts straw-yellow. Bill chrome yellow with vermilion spot at angle; feet and legs livid flesh-color; iris light hazel. *In winter:* Iris golden yellow; bill and feet paler than in summer; head and hind-neck lightly touched with pale brownish gray. *Immature:* Sordid white, shaded below (most uniformly on belly) with brownish, and slightly mottled above with pale reddish brown; exposed primaries chiefly brownish dusky, narrowly tipped with white; tail brownish dusky terminally (narrowly tipped

[1] Birds of the Kotzebue Sound Region. Pac. Coast Avifauna, No. 1, p. 9.

with white), finely mottled brownish and white, changing to pure white basally. Bill flesh-colored, tipped with black—always the whitest of local young gulls. Length of adult: 533.4-812.8 (26.00-32.00); wing 431.8-469.9 (17.00-18.50); tail 203.2 (8.00); bill 50.8-76.2 (2.00-3.00); depth at nostril 20.3 (.80); tarsus 63.5-82.5 (2.50-3.25).

Recognition Marks.—Largest of local gulls; plumage almost white above; primaries and tips broadly white, distinctive.

Nesting.—Does not breed in California. *Nest:* As in *glaucescens*. *Eggs:* See description of normal gull type under Western Gull. Av. size 76.2 x 53.3 (3.00 x 2.10). *Season:* June–July; one brood.

General Range.—The Arctic regions. In America breeding from northern Greenland through the Arctic Archipelago and along the mainland coasts to the Aleutian Islands and the mouth of the Kuskokwim River in Alaska. Winters along the coasts of the Arctic and sub-Arctic zones and from the Aleutians and Greenland south to Monterey, the Great Lakes, and Long Island; casually further.

Occurrence in California.—Not common winter visitant along the coast south to Monterey and less commonly to Santa Barbara.

Authorities.—**Cooper** (*Larus hutchinsii*), Proc. Calif. Acad. Sci., vol. iv., 1868, p. 9 (Farallons and San Francisco Bay); *Loomis*, Proc. Calif. Acad. Sci., ser. 2, vi., 1896, p. 22; *ibid.*, ser. 3, zool. ii., 1900, p. 357 (Monterey); *Dwight*, Auk, vol. xxiii., 1906, p. 30 (full desc.; crit.); *Cooke*, U. S. Dept. Agric., Bull. no. 292, 1915, p. 22 (distr. and migr.) which also consult for all succeeding species of Gulls and Terns; *Bent*, U. S. Nat. Mus., Bull. no. 113, 1921, p. 52 (life hist.; desc. and photos of nest, eggs, etc.) and so for all species of Lariformes.

NEXT AFTER the Ivory Gull (*Pagophila alba*), whose attainment of white plumage is absolute, the sturdy Glaucous is most nearly assimilated to the color of the ice, which forms the familiar setting of its summer home in northern Alaska and its winter home in the Aleutians. With *leucopterus*, a smaller species of exactly similar pattern, not found in the North Pacific, it shares, or divides, dominion of all southern and middle Arctic coasts. Its southern breeding range overlaps that of *L. glaucescens* and perhaps of *L. nelsoni* in the Pacific, and that of *L. kumlieni* in the Atlantic tributaries.

Our chief interest in *hyperboreus* attaches to the fact that a few, usually stray individuals, winter south to Monterey or even Santa Barbara. We count upon seeing one or two of them every winter at the Channel City; and twice, in midsummer, I have seen stranded youngsters, orphans who had forgotten to migrate, sitting on the sands of "Shore Acres" inside the city limits. With Heermann Gulls ranged alongside of them and Westerns galore for companions, one could not help remarking and speculating upon that perfect gradation of color in gulls which obtains along our northeast Pacific coast. See! there is *heermanni*, the slaty-black fellow who nests along the western coast of Mexico as far north as Ildefonso; then *occidentalis*, he of the plumbeous mantle and black wing-tips, breeding from Lower California to the middle coast of Washington; then *glaucescens*, with pale gray mantle and gray wing-tips, breeding north to

the Aleutians and Kotzebue Sound; then *hyperboreus*, with palest gray mantle and white primaries, breeding north to Point Barrow and Banks Land; and, lastly, *Pagophila alba*, the all white bird, who would nest on the Pole itself, if that would stand still long enough. A beautiful gradation from Ethiopian brunette to Eskimo blond! But what is the meaning of it all? One can see why an "ice gull" should be white, but why should *heermanni* and *fuliginosus* and *modestus* of the tropics be sooty? and why this accurate gradation?

Taken near Santa Barbara *Photo by the Author*

WHERE TRITON BLOWS HIS WREATHED HORN

No. 272

Iceland Gull

A. O. U. No. 43. **Larus leucopterus** Faber.

Description.—"Similar in coloration to *L. hyperboreus*, but much smaller, with relatively smaller bill and feet and longer wing"—Ridgway. Length of adult about 609.6 (24.00); wing 101.6 (4.00); tail 41.9 (1.65); bill 11.2 (.44); tarsus 13.7 (.54).

Recognition Marks.—Gull size; nearly white coloration of adult, very light coloration of immature; much smaller than Glaucous Gull.

Nesting.—Does not breed in California. *Nest* and *Eggs:* Much as in next species. Av. size 68 x 48 (17.3 x 12.2) (Bent). *Season:* June.

General Range.—Coasts of the North Atlantic and adjacent portions of the Arctic Ocean. Breeds in Arctic regions from Victoria Land, Boothia Peninsula, and western Greenland, east (probably) to Nova Zembla; winters south along the Labrador

coast to the Bay of Fundy, more rarely to Long Island, casually to Sault Ste. Marie, Lake Erie (Lorain), Cape Hatteras, etc. In Europe winters south to the northern British Isles and the Baltic, rarely to northern France.

Occurrence in California.—One record of a specimen picked up dead at Buena Vista Lake, Dec. 30, 1921, by Loye Miller and A. van Rossem.

Authorities.—Dickey and van Rossem (*Larus leucopterus*), Auk, vol. xxxix., 1922, p. 411 (Buena Vista Lake, Dec. 30, 1921, 1 spec.); *C. W. Townsend*, in Bent, U. S. Nat. Mus., Bull. no. 113, 1921, p. 62 (life history).

THE OCCURRENCE of this North Atlantic species in California must be reckoned purely fortuitous — or, if we admit a designing Providence, it was brought about in order that the hearts of two bird-men might be made glad with a new record (and, incidentally, the pages of this book burdened with an account of a bird which no reader, on any theory of probabilities, will ever see again in California). Also, fifteen species and subspecies of gulls for California is "no that bad". The quest of records has all the rewards of life in the open and all the fascination of a game of chance; while the interpretation of records keeps a hundred ornithologists clucking contentedly in the closet.

No. 273

Glaucous-winged Gull

A. O. U. No. 44. **Larus glaucescens** Naumann.

Synonyms.—Common Gull. Harbor Gull. Blue Gull. Burgomaster (name properly restricted to *L. glaucus*).

Description.—*Adult in summer:* Mantle pearl-gray (of about the same shade as that of *L. argentatus*); wing-tip chiefly gray, of about the color of back—in particular: 1st primary nearly uniform pearl-gray with a large subterminal spot of white on both webs, separated by gray band from white tip; 2nd, 3rd, and 4th primaries ashy gray terminally, changing through white (narrowly) to pearl-gray of basal portion, tipped with white; 5th and 6th as in preceding, but ashy gray subterminal portion narrower, and contiguous white broader; remaining primaries and secondaries color of back with broad white tips. Remaining plumage pure white. Bill yellow, a rounded spot of bright vermilion at angle of lower mandible, this usually shadowed above by a dusky spot (this dusky spot is the last persistent trace of adolescence; it is sometimes larger than the red spot in specimens otherwise perfectly adult, and only the oldest birds are entirely without it); feet dull flesh-pink, or pale purplish rosy; irides brown, of varying shade. *Adult in winter:* Head, neck, and breast, but not throat, obscurely (or, rarely, heavily) clouded with light grayish dusky of a vinaceous cast. *Downy young:* Bill and feet black; down chiefly grayish white, upperparts spotted and striped in intricate but characteristic pattern with grayish black. *Young-of-the-year:* Bill black; plumage grayish dusky, with a vinaceous cast, nearly uniform below, but above

Gull and Surf

From a photograph, Copyright 1907, by W. L. Dawson

varied by coarse spotting of dull white and (or) pale buffy. *Second year young:* As in preceding but bill flesh-colored basally; plumage lightening and clearing somewhat irregularly, but wings and tail darker by contrast; the tips of the primaries dusky gray, sometimes appearing almost blackish. *Approaching maturity:* Upperparts ashy- to pearl-gray, but some clouding of dusky on wing-coverts; terminal portions of primaries of darker gray than in adult and not distinctly white spotted and tipped; underparts more or less marked with dusky; bill blackish, clearing (yellow) except in subterminal band, where black persistent in diminishing area. Length of adult very variable: 584.2-711.2 (23.00-28.00); average about 673.1 (26.50); wing 406.4-442 (16.00-17.40); bill 53.3-66 (2.10-2.60), depth at angle 17.8-22.9 (.70-.90); tarsus 67.3 (2.65).

Recognition Marks.—Size of *occidentalis* or larger, and after it, the commonest large gull in winter; absence of black in wing distinctive for all but *glaucus*, from which it is distinguished by darker mantle and definite pattern of gray in wing-tip; 2nd primary narrowly tipped with white, as compared with *L. nelsoni* (H.). *Young birds* are of a lighter and more blended coloration than those of *L. occidentalis*, and their primaries and tail-feathers are much lighter. Those of *L. occidentalis* are invariably blackish.

Nesting.—Does not breed in California. *Nest:* As in next species. *Eggs:* 3; see description of "Normal Gull Type" under next species. Coloration averages lighter as to ground, and pigments darker (redder or more inclined to bister) or greener. Av. of 40 eggs in M. C. O. coll.: 70.4 x 49 (2.77 x 1.93); index 70; range of measurements 64.3-83.6 by 45-53.3 (2.53-3.29 by 1.77-2.10). *Season:* June; one brood.

General Range.—Coasts and islands of the North Pacific Ocean, breeding from the coast of Washington (Destruction Island) north to Norton Bay, Alaska, St. Lawrence Island, and the adjacent mainland of Siberia, and west along the Aleutians to the Commander Islands. Retires in winter to open harbors, and migrates as far south as Guadalupe Island, Lower California, and on the Asiatic side to Japan.

Distribution in California.—Common winter resident south along the coast to San Diego. Most abundant in San Francisco and Monterey Bays.

Authorities.—Lawrence (*Larus glaucescens*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 842 (Bodega); *Dwight*, Auk, vol. xxiii., 1906, p. 35 (desc.; crit.); *Jones*, Wilson Bull., no. 65, 1908, p. 197 (Carroll Id., Wash., breeding; desc. nest and eggs).

ONLY the sea-faring man may boast of acquaintance with the mighty Albatrosses; and only the lucky adventurer may follow the fortunes of the sea-fowl amid their sea-girt rocky homes; but there is no man so humble that he may not know something of the joys of ocean life. To the city man, especially, the gull is the one visible point of contact with the Great Beyond of Nature. Pray, consider what a benevolent miracle it is that these most improvident of God's creatures, the birds, are impelled to loiter for a season about the doorstep of a great city. These thronging docks, upborne by close-set piles, and housing the wares of Occident and Ind, what are they but the very ramparts of order, the symbolical breastworks of organized human industry now millenniums old! And yet, upon a wooden pedestal hard by sits a gull, serene, sedate, unhurried, a son of the wilderness gazing

Taken in Seattle *Photo by the Author*

PORTRAIT OF GLAUCOUS-WINGED GULL

upon you with level eye, and rebuking by his very blue-gray calm the pomp and madness of men. This throbbing ferry-boat grimly intent upon the business of getting its human freight from shore to shore, is still our best serviceable solution of the transportation problem. The gull furnishes his own conveyance, simple, subtile, compact, yet elegant beyond the powers of art, and adequate beyond the dream of engineers. Effortless, noiseless, tireless, he views from a thousand easy angles your muddled helplessness, and mocks by a thousand airy caprices your tedious destiny as freight.

You have escaped for the nonce from the counting-room, fetid with usurious plots; his business has always been conducted in the open, his many farings *viséd* by the sun, and his lodging-places purified by the gentle rains. You are concerned about your clothing, and you dress laboriously for "the occasion"; his wardrobe is always on his back, well-fitting, seasonable, and "correct." You, poor human, are worried about the in-

creased cost of living; His Opulence, the Gull, fares fat on what you squander, and yawns contentedly over a full crop. As for revels, what more giddy whirl than the aerial dance of the white-winged watchers, as they welcome an incoming steamer, or divide the cook's largess on the churning waters! What! You tired-eyed galley slave of Fortune, you spent son of Ambition and dull Care! Consider the sea-gulls how they fare, and forget yourself — for an hour.

The gulls are mother Nature's pledge that she has not forgotten us. The sparrows gibbering in the street yonder are scant comfort to the human heart; — outcasts they are, mere collocations of soil and smut, blatant, futile. But here, where sea meets shore, Nature deals kindly with us and sends daintily liveried messengers to prophesy of a world beyond. White for purity, pale blue for tremulous hope and reminiscence of heaven (when skies are dull); these, with a little black for tagging — recognition marks — compose the dainty costume of a full-grown gull. The murky flood below gnaws sulkily at the underpinning of the wharfage, or recoils in turbid fright from dark secrets of vegetable outlawry; but the sea-birds, hovering over, spotless, graceful, debonair, make us forget our partnership of guilty knowledge, and pledge.

Taken in Washington *Photo by the Author*

SAILORS

Taken in Seattle *Photo by the Author*

YOUNG BURGOMASTERS

us to visions of the limpid ocean, all-powerful and all-purifying.

To and fro, forward and back, in and out, up, down, and around, moves the restless multitude when the hungry mood is on,— a twirling kaleidoscope of action. And, while the gulls are no songsters, not the least of their charm lies in the manifold cries, in the trumpet calls and croaks, in the barks and screams, with which the birds mark the progress of their quest. And when a treasure of floating biscuits is discovered, how the screams rise to a grand medley of stridor, fierce, exultant, like the triumph of Tritons over smitten reefs!

Truth to tell, we owe the continued presence of our thousands of seagulls through the winter chiefly to the activities of our fish markets and our packing houses, and to the fact that the city's garbage is dumped daily at the advancing edge of the tide lands. At the dumping grounds the arrival of each loaded scow, in charge of Antonio or Pietro, is greeted with a double Chautauqua salute of fluttering wings, and hoarse huzzas besides. Pandemonium reigns until the tide has divided the spoil, and these children of the second table have all been fed.

Toward noontide, when the garbage gatherers have given over their task, the birds retire according to their kind, to foregather with their fellows for the midday siesta, which is an essential part of every well-regulated bird-day. The Mews assemble on the water in some open space and ride at anchor, or else rehearse in gabbling, duck-like tones the memories of Alaska. The Glaucous-wings, with their cousins, the Westerns and the Herrings, line the railings in solemn rows, or else betake themselves to some retreat of inaccessible piling. Here, each on a pillar like St. Simeon Stylites, they ruminate and slumber till the pangs of returning hunger impel them once again to action. The California Gulls prefer to

muster on the made lands or open tide flats. Here their white battalions of rest afford a pleasing contrast to the squalor of commerce behind them.

One marvels at the boldness these harbor gulls at times display, especially when a touch of winter has made us all akin. The man who minds his own business may sometimes pass within six feet of sitting birds — pass, not pause. For let him stop but that fraction of an instant necessary to adjust a focus, and the wary birds are off, their minds poisoned by dark suspicion. When the great hunger is on, it is possible to bait the gulls to the camera in many ways; but when that aching void is filled, all direct efforts at acquaintance are futile. Thinking to effect an *ensemble* piece, I once dumped a keg of choice "seconds" from the rails of a packing house. The sun was bright, the camera set, and the focus chosen. The gulls burdened every pile and timber in the vicinity; and yet as that wanton meat floated on the tide, the pampered birds only leered foolishly at it, and resumed their meditations.

But it is not alone as pensioners of the city's untidy soup kitchen that we may know the gulls. Although undoubted children of the sea, the gulls have certain Limicoline affinities, which lead them to seek the vicinage of ponds and fresh-water shallows. That is to say, the ur-ancient ancestor of the gulls was a swamp-loving bird, and the gull is but answering the primeval call when it forsakes the sea to idle about in flooded meadows or to haunt some alluvial bar. On a lush day in early spring I have seen hundreds of these adventurers pattering about the dank truck farms of the upper bay, now stopping to gaze at their images in the shallow mirrors of a recent rain, now wading into the ooze and treading it in an apparent ecstasy of delight over its squashiness.

Taken in Seattle *Photo by the Author*

IDLERS

Taken on S. S. Princess Beatrice *Photo by the Author*

AN EAGLE POSE

At another time the whim of the aeronaut may seize whole companies of gulls, and they will sail about over the city, gyrating by the hour in utter aimlessness, save such as actuates park strollers on a summer afternoon.

Taken off the Coast of Washington *Photo by the Author*

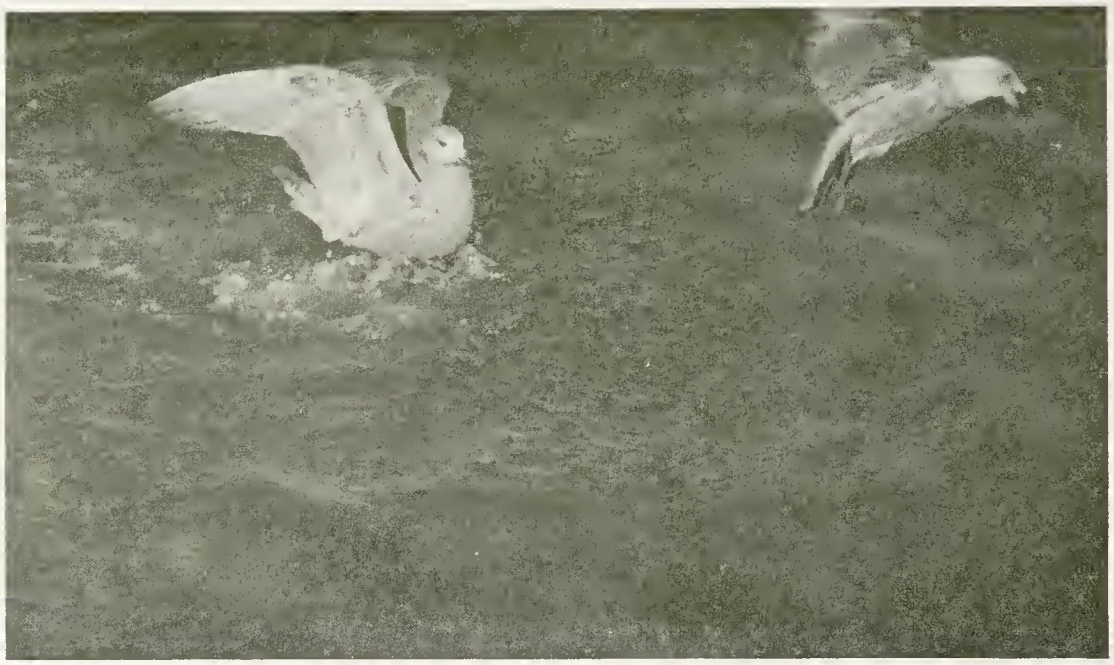
PEECHWAH, ONE OF THE OLYMPIADES

While it is true that the Glaucous-winged Gull does not breed within the limits of California nor anywhere south of Latitude 47°, its breeding habits so closely parallel those of our more familiar Western Gull that I venture to reproduce *verbatim et literatim* the account which appeared in "The Birds of Washington": Nothing in the domain of ornithology can exceed the romantic interest of a sea-bird island. When to the stubborn challenge of the rock itself and the screaming of the apprehensive fowl, is added the majestic sub-dominant of the roaring sea, you have a thing to stir the heart of vikings. It was the wine of adventure, no doubt, as well as the underlying necessity for food which prompted an Ozette Indian to scale "Peechwah" within recent memory; and which tempted the young Quileutes of a bygone generation to sack Cake Island[1], whose sides appear "more than perpendicular."

Once at home, the gulls nest almost anywhere, save that they have not yet been driven into trees, as is the case along the Maine coast. Slop-

[1]Islands of the Olympiades, off the coast of Washington, now included in the Quillayute Needles Bird Reservation.

ing, grass-covered hillsides are favorite places, and the seclusion of the underbrush is not despised; but the sculptured chambers of sandstone, hollowed by the high-flung chisels of the winter's storms, constitute the ideal setting for a gull's nest. The eggs, barring mishap always three in number, are in color and markings skillful epitomes of their average surroundings. The chicks, likewise, are marked for obliteration. They have, moreover, a faculty of absolute movelessness on occasion, which those of us who are parents ardently covet for our six-year olds.



Taken in Washington *Photo by the Author*

FIRST COME FIRST SERVED

Gull discipline can be very stern while danger lasts; but once let the parents suppose themselves unobserved, and they will lavish every attention upon their offspring. The fish-laden bird, returning from the chase, first disgorges his catch of smelt or the like upon a convenient spot; then in a wheedling voice summons the chicks from hiding. They come skipping up like kids, and fall to, while the doting parents dance attendance and utter incessant blandishments. And after the youngsters have stuffed themselves to repletion, the mother still urges, "Can't Mama's darlings eat just one more fishy?" until the beholder, recalling the ways of his own kind, is almost nauseated.

Gulls are credited with "screams" or "cries", but it is not, perhaps, generally understood that the notes of different species are distinctive; or that each species possesses a considerable vocabulary with which to voice

the major emotions. This fact was forced home upon the writer only when he lay in camp, a voluntary Crusoe for a week, on a bird rock of lower Puget Sound. Here, since there was nothing to be heard save the murmuring of the sea, the hissing of Pigeon Guillemots, and the notes of the Glaucous-winged Gulls, it is not surprising that the last-named began to fall into some sort of order, with dawning significances as the week drew to its close. At the risk of wearying the reader, since the experience is possibly unique, I venture to enumerate the leading sounds, or phrases, of this little-known gull tongue:

The *beak-quaking notes*—harsh, unmusical, and of moderate pitch, used to express distrust and continued disapproval. During delivery the mandibles are brought together three or four times in moderate succession. This is the ordinary scolding, or distress cry, of characteristic and uniform pitch, save that it is raised to a higher key when the speaker becomes vehement. The phrase varies from three to five notes, and is uttered in the following cadences: *kak′-ako′; ka′ ka, ka′ ka; ka′ ka kaka′; kakak′, ka′ kakak′; kak′-akak′-a-ka.*

Taken in Seattle *Photo by the Author*

FACING THE TIDE

Kawk—a note of inquiry or mere communication; has many modifications and varies from a short trumpet note to the succeeding.

Klook—a sepulchral note of unfailing interest but uncertain meaning.

The *trumpet notes*—long or short, single or in prolonged succession, high-pitched, musical, and far-sounding. During delivery the head is thrust forward, the neck arched, and the throat and mandibles opened to their fullest capacity. These are pleasure notes and are used especially on social occasions when many birds are about — *kleer, kleer, kleer, kleer.*

A(n)k, a(n)k, a(n)k, a(n)k, a(n)k, a(n)k—minor trumpet notes of regular length and succession, used in expostulation or social excitement, frequent and varied.

Klook, klook, klook—in quality a combination of *kawk* and the trumpet tones, uttered deliberately and without much show of energy. Used chiefly in domestic conversation of uncertain import.

Oreé-eh, oreé-eh, oreé-eh, añ añ añ—an expression of greeting, as when uttered by a sitting bird welcoming one about to alight. The notes of the first series are trumpet tones in which the second syllable of each member is raised to a higher pitch, while the voice is dropped again on the third. The second series is lower and more trivial but still enthusiastic, as though congratulatory to the guest arrived.

Ko—shouted once, or thrice repeated, in quelling a clamor. "Hist! Hist! You're making too much noise; he's watching us."

Arahh—a slow and mournful trumpeting, usually uttered a-wing to express anxiety or grief, as at the loss of a chick.

Oo anh, oo anh—repeated indefinitely. Notes of coaxing and endearment usually addressed to children, but occasionally to wedded mates. The cooing of doves does not express so much adulation, or idolatrous devotion, as the gull throws into these most domestic tones.

No. 274

Western Gull

A. O. U. No. 49. **Larus occidentalis occidentalis** Audubon.

Synonym.—Western Herring Gull.

Description.—*Adult in breeding plumage:* Mantle slaty gray or plumbeous-slate, sharply contrasting with terminal white of secondaries and tertials; the first three primaries chiefly black on exposed portion, the succeeding three black subterminally in decreasing area; the first six primaries broadly tipped with white; the outer primary (and occasionally in lesser degree the second primary) white for about an inch and a half subterminally, crossed distally by irregular black area; remaining plumage

The Farallons

After a gum print by Fedora E. D. Brown

From a negative by the Author

Taken in Humboldt County *Photo by the Author*

A DECORATED CEILING

pure white. Bill stout and deep with very convex culmen and strongly marked angle, the mandible touched with vermilion on side near tip; irides brown; feet pale purplish rosy or flesh-colored. *Adult in worn plumage:* Mantle duller, sometimes glossed with brownish; subterminal white spots of primaries disappearing with wear, and the black less intense, more brownish, in extreme cases rusty-weathered. *Adult in winter:* Occasionally, but not always, head and neck all around streaked or finely nebulated with plumbeous dusky. This trait, characteristic of certain other species of gulls in fullest maturity, e. g., *L. delawarensis*, appears to be thrown off in fully adult *occidentalis*. It may be seen in perfection, however, in "near adult" (3rd autumnal?) specimens. *Downy young*: Much as in *L. glaucescens*, but ground-color lighter, more yellowish, and black of markings inclined to brownish. *First year birds:* General color brownish slate, highly varied on back and wings by edgings of grayish white, fulvous, and pale tawny; rump and upper tail-coverts and flanks conspicuously barred dusky and whitish; head and neck lightly streaked with whitish; underparts (except lining of wings, where pure slaty) variously mingled or clouded with sordid white; wing-quills and tail brownish black. Bill dusky black terminally, flesh-colored at base. *Second year birds:* Much as in foregoing, but plumage more blended, nebulation of finer pattern, and general color tone more uniform and with a tinge of vinaceous. *Third year and transition plumages:* (The precise sequences are too complex for our consideration.) General pattern of adult, but white decreasingly clouded with vinaceous dusky, wings decreasingly patched or clouded with brownish gray; primaries lustrous brownish black, *without any white* (this being in some examples the last adult character assumed); tail decreasingly marked with black; black of bill decreasingly persistent on tip. Meas-

Taken in Santa Barbara *Photo by the Author*
HIS RASCALITY, THE WESTERN GULL

urements: length of adult 558.8-685.8 (22.00-27.00); av. of 10 Monterey specimens: length 580.4 (22.85); wing 420 (16.5); tail 162.4 (6.39); bill 53.3 (2.10); depth at angle 20.2 (.79); depth at nostril (base) 18.4 (.72); tarsus 69.5 (2.74).

Recognition Marks.—Standard of "gull size"; dark slaty blue of mantle distinctive in adult; adolescent black spot on angle of gonys less persistent than in other species; pattern of wing-tip simpler than in many, but not affording good field mark; uniform black of primaries long persistent, and best character of young birds, as distinguished from either *L. glaucescens* or *L. argentatus*; body plumage of young darkest.

Nesting.— *Nest:* Placed on ground or in rock niche of sea-girt islet; bulky or scanty; a shallow crater of grasses, dried sea wrack, seaweed, or locally, of "Farallon weed," a coarse composite; ten inches from brim to brim by three inches deep. *Eggs:*

3, rarely 4; if second set, 2. *Normal Gull type* (applicable as a basis for description of all species nesting within the United States): ovate or elongate ovate; *ground-color* (light phase): pale olive-buff or olive-buff, more rarely cartridge-buff, tilleul buff, or pinkish buff; (middle phase): deep to dark olive-buff: (dark phase), light brownish olive to buffy olive, tawny olive, isabella color, or, rarely, buffy brown. *Pigmentation* (of four general types): first, boldly and rather sparingly *spotted* with brownish black or dark sepia (washing to Saccardo's umber), or bister (washing to Prout's brown), or light brownish olive (washing to isabella color), exceptionally, tawny olive or brownish olive (washing to buffy olive), yellowish olive or cinnamon-buff; second, as first type, with much doubling or "shadowing" (under-shell marking) by violet-gray of various shades; third, color of pigments as before, but pattern highly diverse, vermiculated or scrawled, scrawling sometimes confined to a broad girdle around the larger end, but often involv-

Taken on the Southeast Farallon *Photo by the Author*

AN EXPOSED DOMICILE

ing the entire egg in intricate patterns; fourth, pattern more or less suppressed or blended. Abnormally, pigment sometimes altogether wanting, and sometimes absolutely confined to cap on larger end. *In general: eggs clay- or stone-colored, spotted and blotched with brownish black.* As compared with the foregoing, eggs of the Western Gull incline to middle and darker grounds, and exhibit a high degree of variation. Av. of 40 specimens in the M. C. O. coll.: 69.9 x 49.3 (2.756 x 1.944); index 70.5. Range of measurements: 66.3-75.7 by 45.2-52.3 (2.61-2.98 by 1.78-2.06). *Season:* March–June, according to latitude (July–August where molested); one brood.

General Range.—Pacific Coast of North America, breeding from Lower California north to the coast of Washington (Willoughby Rock, Carroll Islet); at the close of the breeding season wandering north to the coasts of British Columbia, and southward to the Tres Marias Islands off Tepic.

Distribution in California.—Resident; breeds abundantly on suitable islets

Photo by D. R. Dickey

THE ETERNAL QUEST

along the entire coast, and upon some of the rocky headlands. Especially numerous on the Farallons. Occurs casually in the interior.

Authorities.—Lawrence (*Larus occidentalis*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 845 (Bodega; Presidio; San Diego); *W. E. Bryant*, Proc. Calif. Acad. Sci., ser. 2, i., 1888, p. 37 (Farallon Ids., breeding; nest and eggs).

No. 274a Hyperion Gull

A. O. U. No. 49, part. **Larus occidentalis livens** Dwight.

Synonym.—Dwight's Western Gull.

Description.—"Similar to *Larus occidentalis occidentalis*, but mantle a darker plumbeous or deep neutral instead of plain neutral gray and usually four outer primaries, instead of two, black basally without gray areas" (Dwight).

Range.—Both coasts of Lower California, breeding north to the Farallon Islands.

Authority.—Dwight, Proc. Biol. Soc. Wash., vol. 32, Feb. 14, 1919, pp. 11-14. [Under the particular description (p. 12) we read: "Tarsi and feet in life lemon yellow," and again, "Both forms of *occidentalis* have yellow feet (the tarsus of the type of *livens* is recorded by the collector as 'lemon yellow')." Again, "Apparently Schlegel (Mus. Pays. Bas, vi., 1863, p. 15) was the first writer to correctly describe the species as having yellow feet." All this, of course, is exquisitely incorrect. The feet of all adult gulls of the *occidentalis* type are *red*].

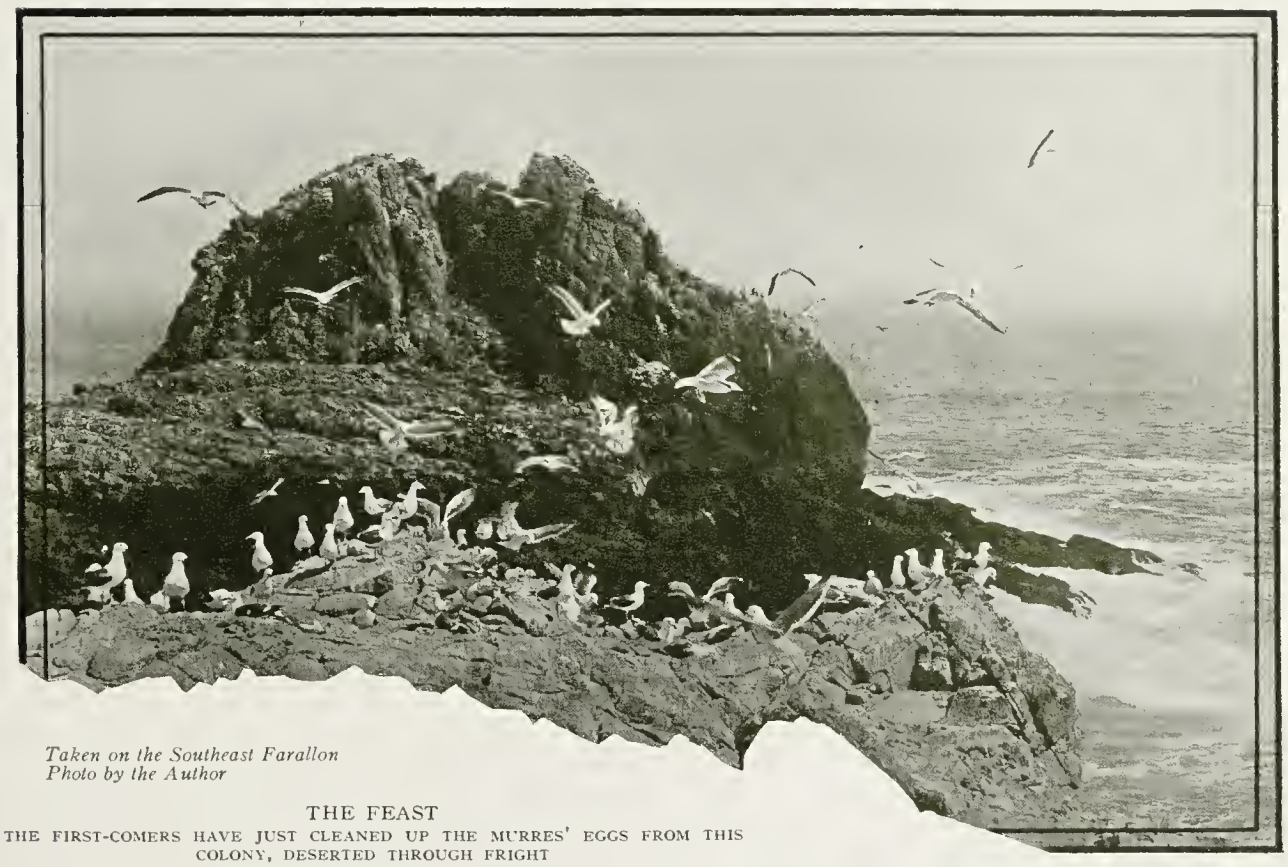
The Gray Lady

Portrait of Western Gull

From a photograph, Copyright 1923, by W. L. Dawson

Taken on the Farallons

MUCH THAT IS GOOD and all that is evil has gathered itself up into the Western Gull. He is rather the handsomest of the blue-mantled *Laridæ*, for the depth of color in the mantle, in sharp contrast with the snowy plumage of back and breast, gives him an appearance of sturdiness and quality which is not easily dispelled by subsequent knowledge of the black heart within. As a scavenger, the Western Gull is impeccable. Wielding the besom of hunger, he and his kind sweep the beaches clean and purge the water-front of all pollution. But a scavenger is not necessarily a good citizen. Call him a ghoul, rather, for the Western Gull is cruel of beak and bottomless of maw. Pity, with him, is a thing unknown; and when one of their own comrades dies, these feathered jackals fall upon him without compunction, a veritable *Leichnamveränderungsgebrauchsgesellschaft*. If he thus mistreats his own kind, be assured that this gull



Taken on the Southeast Farallon
Photo by the Author

THE FEAST
THE FIRST-COMERS HAVE JUST CLEANED UP THE MURRES' EGGS FROM THIS COLONY, DESERTED THROUGH FRIGHT

asks only two questions of any other living thing: First, "Am I hungry?" (Ans., "Yes.") Second, "Can I get away with it?" (Ans., "I'll try.")

The ocean, to be sure, offers the gull an abundance of "natural" food. Surface-ranging fish, herring, smelt, and the like, are staple objects of pur-

Taken in Santa Barbara *Photo by the Author*
A CLOSE-UP

suit; and the birds quarter the sea at a considerable height until some indication of a traveling school is noted. Tell-tale haste on the part of any one bird is remarked by distant comrades, and all hurry to the scene of slaughter. Excited screams publish the news still more widely, if the prospect is a good one, and a thousand birds may join the feast before the bewildered fish realize that they are furnishing both mirth and meat, and go below. Danger past, the fish soon return, and the wily gulls, according to Anthony, by stalking them from the rear, are able to make another raid before the alarm has become general.

The Indians understood the value of this fish-finding propensity on the part of the gulls, and when the birds followed the smelt ashore, at a northern village, a shout would run from hut to hut and the seine be hurried out. And the fishermen of today are so much alive to the advantages afforded by these observation planes that they share the booty good-naturedly when a fat haul has been made.

When fish are scarce the gulls resort to the beach and strip every carcass, whether of fish, flesh, or fowl, which the sea has cast up. Once, after a storm, on a northern beach, I followed a high-piled windrow of dead tom-cods for miles. The gulls were in their glory, but in spite of the fact that meat was so abundant, I noticed that each bird stuck to his job, once it was started, and was willing to contest his rights against all comers. Seeing a half-picked carcass at the end of a trail upon the sand, I traced it one hundred paces, by actual count, to its original resting place. In dragging it the successful bird had, naturally, pulled backward, so that his course was marked throughout by reversed footprints.

Next after carrion, clams are a favorite food. These are gleaned from the surface, where they have been cast by the tide; or, in rarer instances, they are dug, most actively, from their burrows in the sand. The "razor-backs" are easily crushed and gutted; but the cockles require a most ingenious expedient. According to many witnesses, a gull will carry the clam aloft and drop it on the rocks, where the shell will be smashed and the contents released. Anthony tells of instances where birds had only half learned their lessons and dropped the clams upon the sand,

Taken on the S. E. Farallon *Photo by the Author*

A BREEDING COLONY

seemingly much mystified that the pronunciation of the sacred formula, "Open sesame," had failed to effect the desired result. Mrs. Bailey tells of a fisherman at Tillamook Bay who dug a sack of clams, and, not wishing to pause just then to wash them and stow them away in the boat, threw them down on shore and turned away to dig another sackful. When he returned he found that the busy gulls had cleaned out the whole pile, opening the shells and cleaning them so expertly that not a particle of meat was left.

It is at the breeding season, however, that the Western Gull accomplishes real mischief. While he effects a passable truce with his own kind at that season, it is that he may the better combine with his fellows and terrorize all other breeding sea-birds. As an egg-thief and as a kidnapper of infants the Western Gull is simply incorrigible. The only chance which the lesser fowl, petrels and auklets, have of escaping the

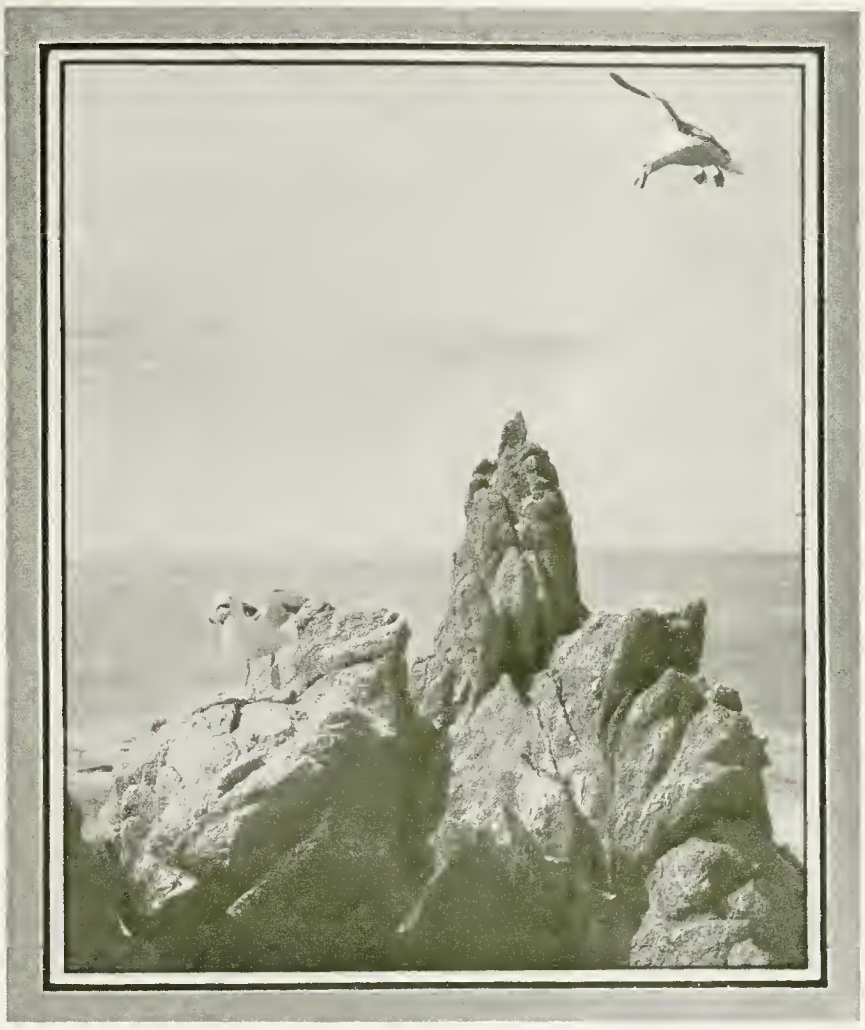
rapacious beak is to burrow under ground or to file into crevices. And at that Anthony tells us:[1] "I have seen a Western Gull pull a Cassin's Auklet from a somewhat more shallow burrow than the usual and swallow it whole with the same gusto and apparent relish with which it bolted the egg a moment later." A bird which can swallow an adult Cassin Auklet, a bird with a body fully as large as that of a robin, can make away with young murres and baby shags at an alarming rate. As a consequence, the murre ledges are repeatedly attacked and sometimes pillaged, in spite of the fact that the attendant parents huddle together in actual contact. The case with the cormorant is even more desperate, especially when the visit of a fisherman or a birdman puts the shags to flight. As Anthony says again:[2] "The advent of man in the region of a cormorant rookery is hailed with delight by every gull on the island; but to the poor cormorant it is a calamity of the deepest hue. As the frightened birds leave the nests, which have so far never been for a moment left without the protection of at least one of the parents, the screaming gulls descend in swarms to break and eat the eggs or kill the young as the case may be. Small cormorants are bolted entire despite their somewhat half-hearted

[1] "Random Notes on Pacific Coast Gulls" by A. W. Anthony.
[2] Auk, Vol. XXIII., April, 1906, pp. 135, 136.

Photo by the Author

GULLS AT REDONDO
CHIEFLY IMMATURE WESTERNS

protests; larger birds are dismembered by two gulls assisting in the operation, after the well-known manner of barnyard chickens with a worm; and before the adult cormorants have recovered from their fright and returned to protect their homes, a colony of several hundred nests will be almost destroyed. I have found young Western Gulls feeding on cormorant squabs half a mile or more from the nests from which they had been abducted."



Taken on the Southeast Farallon *Photo by the Author*

HEY! THERE!

THE PHOTOGRAPHER HAS BAITED THE BIRDS WITH MURRES' EGGS, AND THE OTHER FELLOW HAS "BEATEN HIM TO IT"

In this connection I cannot forbear some trenchant criticism of the policy which the Department of Agriculture has hitherto pursued with reference to the protection of certain coastal breeding grounds of the sea-fowl. It was highly proper that certain threatened species, such as the California Murre and the three species of Cormorants and the Black Oyster-catcher, should be guarded, not alone from the age-old depredations of the natives, but from the increasing encroachments of irresponsible whites; but when that protection, *applied indiscriminately*, had the effect of fostering and multiplying the worst enemy of those sea-fowl, namely, the Western Gull, the actual effect has been the direct opposite of that ostensibly intended. The Western Gull has thrived mightily under protection, while the other bird population has steadily decreased. If we are to assume to regulate the affairs of the sea-fowl, we must really *regulate* to the advantage of the greatest number of species, and not continue

Taken at Santa Cruz *Photo by the Author*

WESTERN GULLS AT SANTA CRUZ

to raise wolves and sheep in the same fold. I am not, of course, in favor of annihilating the Western Gull; we need him—at least some of him; but I am in favor of reducing him to one-half or one-fourth of his present numbers. This should be done quietly and judiciously and *officially*.

In the spring of 1911 the writer was privileged to visit the Farallon Islands, which harbor the largest colonies of sea-birds, and especially of Western Gulls, to be found off the coast of California. The breeding population of gulls I estimated at 3000 pairs, an enormous increase over the days of the Portuguese "egg trust," which in the interest of "business" in Murres' eggs had kept the gull population sternly within bounds. The numbers of Murres, as a consequence, were sadly reduced, and the colony of Farallon Cormorants consisted of a pitiful remnant, some thirty-five pairs.

A page from my notebook under date of May 26 records the commonplaces of a two weeks' experience: "Nothing in the life of the Farallons is more striking than the rapacity of the gulls and their determination to profit by any excitement which will frighten the peasantry. No matter

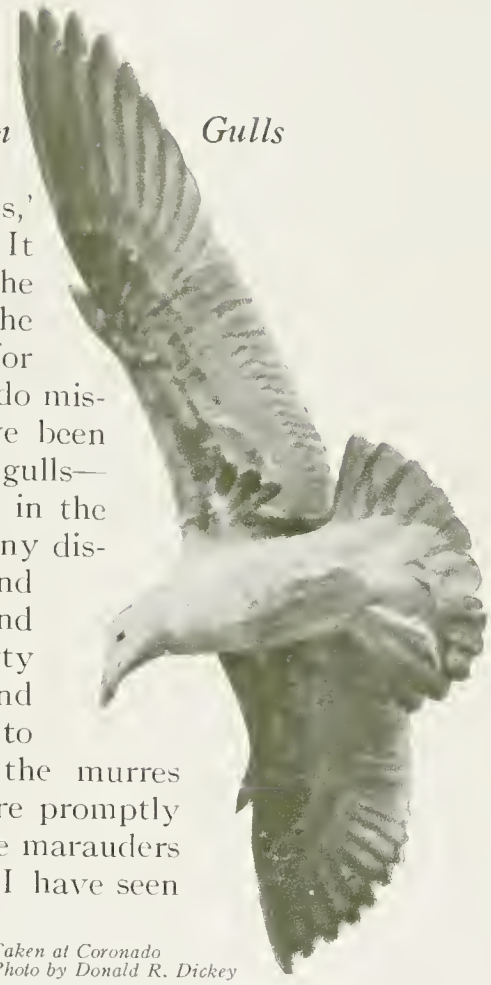
The Gentleman in Gray

Western Gull—A Wind Pose

From a photograph, Copyright 1923, by W. L. Dawson

Taken on the Farallons

if their own homes are threatened, 'Rob the Murres,' they shout, and off they go to try for weak places. It has its historical analogies only in the persecution of the Christians at Rome or in the 'Jew baiting' of the Middle Ages. An idle mob finding itself assembled for any cause and cheated of its first object, proceeds to do mischief to the favorite weaklings. Today I may have been partly responsible for the assemblage of unoccupied gulls—I was making a discriminating study of egg colonies in the west nesting—but I was in no way responsible for any disquiet among the murres. The gulls started that, and my attention was called to it by the outcries on and beyond the crest of the west arch. A crowd of thirty or forty gulls were hovering over a murre ledge and members of the party were continually dipping down to harry the Rumpfoots. The tactics succeeded, for the murres crowded forward and exposed a few eggs, which were promptly seized. At this point I intervened and forestalled the marauders in the name of Science. On other occasions since, I have seen alarms raised among the gulls for which no human presence was responsible, and invariably there is a movement of apprehension along the ledges, a shifting of position and a little desertion on the part of the more timid. And invariably, also, a few gulls detach themselves from the quarreling crowd of their own kind and make a hurried reconnaissance of the loomeries."



Taken at Coronado
Photo by Donald R. Dickey

BANKING
NOTICE USE OF ALULA, OR "THUMB"

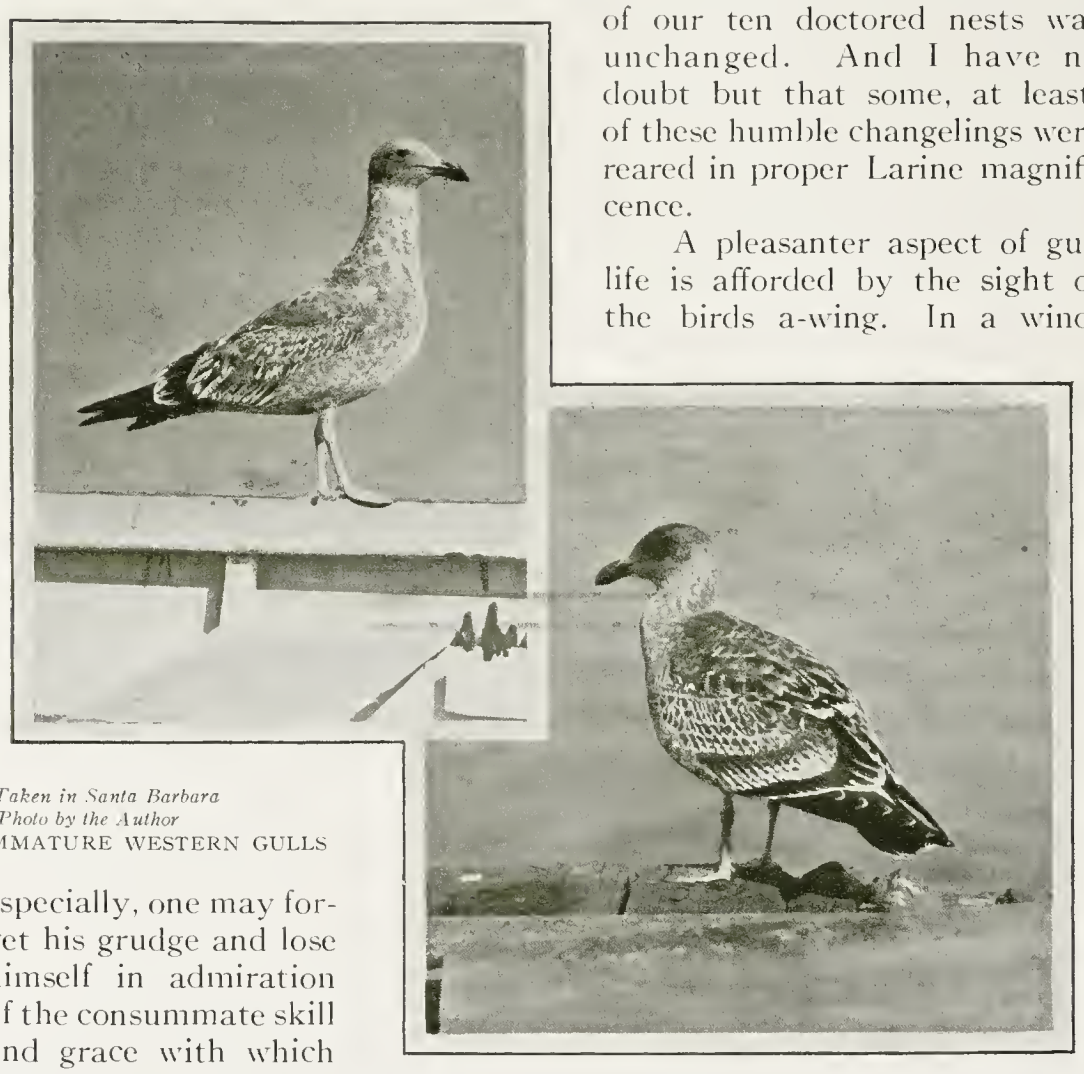
We soon found that if we wanted to do photographic stunts we required no better bait than a few murres' eggs temptingly exposed. The first comer might be wary, but he soon lost his scruples; while each successful seizure thereafter would be chorused by a shout of envious approval from other gulls less bold.

By way of experiment, and to utilize certain murres' eggs which the gulls would have got otherwise anyhow, we arranged a little series of substitutions. Our victims were the gulls nesting on the "shell beach" nearest the north spur of the central ridge. We substituted a murre's egg for a gull's; and bestowed the surplus eggs so gathered upon another member of the gull family. Altogether we "doctored" ten nests, making a careful record of each change for future reference—then retired to note results. In every instance but one the birds returned promptly to their nests. The exception hesitated, apparently through fear of us, and not at all through suspicion of her nest. Even the one who had received a double portion of proper gull eggs did not hesitate to undertake her full

responsibilities. Not one of them appeared to question for a moment the propriety of brooding a garish murre's egg, and this in spite of the fact that every mother of them would have been keen to get a taste of the same egg on a murre ledge. Verily the gull is gullible!

Unfortunately, we were obliged to leave the islands ten days later, and just before the gulls were due to hatch; but we had the satisfaction of noting that the situation in nine of our ten doctored nests was unchanged. And I have no doubt but that some, at least, of these humble changelings were reared in proper Larine magnificence.

A pleasanter aspect of gull life is afforded by the sight of the birds a-wing. In a wind, especially, one may forget his grudge and lose himself in admiration of the consummate skill and grace with which the birds address themselves to the tasks of breasting the wind or coasting down the gale. Here is the original school of aviation—a forty-knot breeze blowing over "Maintop," the western eminence of the Southeast Farallon. Here, if ever, one will see bizarre postures and incipient shipwreck in the air. The most extraordinary thing is the development of speed. Even the



Taken in Santa Barbara
Photo by the Author
IMMATURE WESTERN GULLS

Taken in Humboldt County *Photo by the Author*

A NORTHERN BREEDING STATION

Taken on the S. E. Farallon *Photo by the Author*

NEST AND EGGS OF WESTERN GULL

Taken in Washington YOUNG WESTERN GULL *Photo by the Author*

phlegmatic cormorants go hurtling about like meteors. The "Sea-Parrot," who looks like a pirate with the wind tossing his plumes about, enjoys a ride on the gale; and for all his wings are stubby he can poise on the air like a hawk, or else charge about like a ricocheting bullet. The highest speeds are made *against* the wind, and I am sure that the Baird Cormorant can do 120 miles an hour in the teeth of a forty-five mile norther. But the Western Gull enjoys the sport most of all. He passes and repasses the crest of the hill just for the fun of the thing. Now he lets the wind blow him up like a lost paper napkin, and now he cleaves it with the nicety of a descending razor. The most striking thing about these wind postures is the position of the feet. These are sometimes thrown violently forward, or else maintained in a perpendicular position to check speed or to cover flaws in the wind. Viewed from any angle, a gull or a shag with feet in full play cuts an odd figure.

The wings on these occasions are both arched and reefed, and so fierce are the cross currents and so sudden the flaws, that many of the efforts of the most skilled artists look like the first awkward sprawls of a boy on the ice. Every fiber is tested to the utmost. The bird—the gull at least—careens to absolute perpendicularity in banking; and I have seen a gull bring in the tip of one wing so that it nearly touched the body, and release it again in the fraction of an instant, while the other pinion was unchanged. Regarding the situation in a cold, dispassionate light, as one may, seated on the side of a cliff, *it is not an easy thing to fly*. The birds can have the job for all o' me.

The nesting of the Western Gull is undertaken in April, and the egg complement of three is provided by May 1st or June 1st, according to

n/3 Western Gull

From a photograph by Donald R. Dickey

Taken on Los Coronados Islands

latitude. The nests are composed of dried grasses and weeds plucked by the birds, roots and all; and these become quite substantial structures if the materials are convenient. Ledges, crannies, grassy hillsides, and the exposed summits of the rocks, are alike utilized for nesting sites; while occasionally a bird ventures down so close to the tide-line as to lose her eggs in time of storm. Chicks are brought off by the third week in May, or by the middle of June, according to season, if unmolested. If the first set is removed, however, the birds will prepare a second, consisting almost invariably of two eggs, and these are deposited as likely as not in the same nest as the former set. Deposition occurs at intervals of two or three days.

Taken on Anacapa Island *Photo by Donald R. Dickey*

NEST AT BASE OF *LEPTOSYNE GIGANTEA*

I recall visiting a smaller rock well up the coast where young birds, from infants to those half grown, were in hiding everywhere. The danger sign had, of course, been passed around, and not a youngster on the island but froze in his tracks, no matter where he happened to be. It was pathetic to find, as I did now and then, babes soaking heroically in the filthy green pools left in hollows of the rock by ancient rains, rather than attract attention by scrambling out. One youngster had evidently been nibbling playfully at a bit of driftwood cast high up, for I found him with the stick between his mandibles, as motionless as a Pompeian

mummy. In some instances, if the chick knew himself discovered, he felt free to shift his position with a view to betterment. But instinct did not serve a whit to guide the chicks in such efforts, and they were as likely to topple off a precipice as to find a safer haven.

A company of some hundred adults, fathers perhaps, lay offshore and watched proceedings; but the mothers gave me earnest attention. Three times I was struck upon the head, always from behind, by vicious beaks, while I was engaged in the benevolent task of gathering up babies for a picture. A plague upon this photography of infants anyway! It is appreciated by neither parent nor child. A gull-let in the bush is marble, but only his rump is visible; while a chick in the hand is the squirmiest product of nature. No, sir! he will not keep still, nor stay put for the pitiful fraction of a second. Ergo, the gallery of darlings is still incomplete.

Photo by Donald R. Dickey

AN EVENING MEDITATION

The Hesperian Pinnacles

Western Gulls on the Farallons

From a photograph, Copyright 1923, by W. L. Dawson

The case of the Pacific Coast Gulls offers a peremptory challenge in genodynamics. The dynamic evaluation of species, the appraisal of generic stock, of intergradation, and of isolated colonies,—these are fascinating problems in themselves; and in no other case do solutions appear so easy, so clear cut, or so important, as in the case of a species occupying detached island groups distributed over 24 degrees of longitude. I have already called attention to the fact[1] that the Western Gull at the extreme limit of its breeding range, viz., off the coast of Washington, appears to hybridize with *L. glaucescens*. A clear cut example of this came to light the year after "The Birds of Washington" was published, in 1910. When I had occasion to visit Grenville Point on the 27th day of August, a whining sound, coming from the crest of the Grenville Pillar, a detached rock some 100 yards distant, drew my attention to a very dark bird, a young gull, who was beseeching its wary parents for food. The old birds stood stolidly unheedful, but very alert to the danger ashore. Finally one bird made a scolding tour over my way. His (or her) wing-tips were absolutely devoid of black, a Glaucous-wing if there is any such thing. This bird's mate, known to be such because these two were the only gulls on the rock, and because the chick addressed them both in turn and that repeatedly, was an unmistakable Western, having a somewhat darker mantle and wing-tips definitely black.

And other such examples, less marked but cumulative in their total impression, met my gaze during an inspection tour of the Olympiades bird reserves, conducted in the early summer of 1910. It is very noteworthy, therefore, in this connection that eggs found in this debatable country, off the Washington coast, exhibit the highest degree of variation —due to the interplay of diverse stocks. Southern colonies, on the other hand, so far as examined, exhibit a notable uniformity in respect to the eggs. Save for a few "freaks," due to deficiency in pigmentation, I did not find among a thousand nests examined, on the Southeast Farallon Island, one-fourth the range of variation that obtains on a single rock off the Washington coast (Split Rock), which boasts a population of only forty pairs. Evidently the Farallon colony is closely inbred, or at least reduced to uniformity through long isolation and the absence of any infusion of new stock. There is meat here, and a close study of cölogy will bring important conclusions to light.

[1] "Birds of Washington," 1909, Vol. II., p. 726.

No. 275

Herring Gull

A. O. U. No. 51. **Larus argentatus argentatus** Pontoppidan.

Description.—[This, although undoubtedly the central figure of a large group of similar and closely related members of the genus *Larus*, may for our purposes best be described in terms of constant comparison with the foregoing]. *Adult in summer:* Similar to *L. occidentalis*, but bill relatively slenderer and with angle less pronounced; and color of mantle much lighter, deep pearl-gray instead of plumbeous; pattern of wing-tip subsimilar, but black more restricted by earlier invasion of basal gray, this gray appearing on inner web of 1st primary, and pushing to within two inches of the tip of the 3rd; whereas in *occidentalis* the gray only begins to appear, faintly, on the inner web of the 4th; the pattern of terminal and subterminal white is, however, almost exactly the same. Bill yellow, with spot of vermilion at angle of gonys; feet pale rosy or flesh-color, perhaps a little lighter than *L. occidentalis*. *Early plumages and plumage changes:* as in *L. occidentalis*. First year birds are lighter and less abruptly varied; 2nd year birds are of a lighter shade of grayish brown, and are especially lighter in color on wing-tips and tail (where brownish gray or brownish dusky instead of brownish black); 3rd year birds, not otherwise easily distinguishable, show invasion of characteristic pearl-gray on mantle; *near adult birds* show retarded evolution in the persistence of adolescent black on tip of bill; and fully adult birds in the recurrence of nebulation (with brownish dusky) on head and neck all around, and sides of breast, in winter. Length 558.8-660.4 (22.00-26.00); av. of 10 Monterey specimens: length 600 (23.65); wing 441.4 (17.4); tail 163.2 (6.43); bill 56.9 (2.24); depth at angle 18.1 (.71); depth at base of nostril 16.8 (.66); tarsus 66.5 (2.62).

Recognition Marks.—Standard of "gull size"; mantle rather light bluish gray; *black* wing-tips (with white spots on adult) serve to distinguish from *L. glaucescens;* rosy feet from *L. californicus* (this is the sole certain distinction a-wing) and *delawarensis;* less extensive black on wing-tip and lighter mantle from *occidentalis*.

Nesting.—Does not breed in California. *Nest:* Of weeds and grasses on the ground, or, exceptionally, in (coniferous) trees. *Eggs:* 3; of normal type (see under preceding species). Av. size 71.1 x 48.3 (2.80 x 1.90). *Season:* June.

General Range.—Northern Hemisphere. In America, breeds from coast of Maine, northern New York, islands in Lake Huron north of Lat. 44, and Lake Michigan (Green Bay), Minnesota, Manitoba, and southern British Columbia, north to high Arctic latitudes. Winters south to Cuba, Florida, coast of Texas, Yucatan, and Tepic.

Distribution in California.—Common winter resident along the entire coast; less common south of Monterey. Abundant in San Francisco Bay. Casual in the interior (Salton Sea, Jan. 30, 1913).

Authorities.—**Vigors** (*Larus argentatus*), Zool. Voy. "Blossom," 1839, p. 39 (coast of Calif.); *Kobbe*, Auk, vol. xix., 1902, p. 19 (San Francisco; crit.; relationship to *vegæ*); *Dwight*, Auk, vol. xxxvii., 1920, p. 266 (plumages and molt).

"CAPTAIN, how many kinds of gulls do you see here in the course of a year?" "Gulls? Kinds of gulls?" repeats the man in the pilot-house, the man who knows buoys, harbor lights, and all proper things of

seamanship like a book. "Why, there isn't more than one kind, is there? Well, yes; mebbe they's two kinds, the dark ones and the white ones; or mebbe they's big and little ones." This, of faithful attendants after twenty years' service at sea!

We know, of course, that there are thirteen kinds of gulls in California, besides their blood relatives, the Jaegers and Terns, of which there

Taken in Seattle *From a photograph, copyright 1908, by W. L. Dawson*

A GULL MÉLANGE

are four and eight species, respectively. The captain might have been sooner pardoned if he had answered "Forty!"; for when to the subtle but shifting variety of adult marking is added the interminable shading of childhood and youth, you have a scene of confusion worse confounded, in which not even the expert is at home. But let us see if a little light is possible: The dingy, mottled, or blackish gulls are (with one exception) young birds of the first and second years. Save in the case of Heermann's Gull (*B. heermanni*) all adult gulls are chiefly white, with the upper surfaces of back and wings—the mantle—chiefly blue-gray (pearly gray, ashy gray, or plumbeous); while, also with one exception, the tips of the wings, or primaries, are black, variously spotted and blotched (or not)

Taken in San Luis Obispo County *Photo by the Author*

THE MARINER

with white. All birds which show mixed characters, such as black tail and wing-quills, with mottled plumage, etc., are juveniles of the second or third year.

The most persistent juvenile characteristic in the case of the common larger gulls (*Larus glaucescens*, *occidentalis*, *argentatus*, *californicus*, *delawarensis*, and *brachyrhynchus*) is a gradually diminishing area of black upon the beak (although this in its reduced form is an adult characteristic of *L. californicus* and *L. delawarensis*). With advancing age gulls tend to become lighter in coloration; and in extreme examples (as in the case of certain Western Gulls) the black wing-tips bleach nearly to whiteness, although the characteristic pattern may still be dimly discerned.

Size is also a very variable characteristic in the larger gulls, and it is impossible to distinguish *Larus argentatus* from *glaucescens* on the one hand, or *californicus* on the other, from the standpoint of size alone.

And while we are about it, we may as well repeat that the color of the feet and legs (tarsi) affords one of the most valuable distinctions in the field recognition of all gulls. The Herring Gull belongs to the group having *red* legs, and only by this mark may it be infallibly separated from the California Gull which has gray-green legs.

The Herring Gull begins to return from its northern breeding grounds

The Northward Faring

Herring Gulls at Pizmo

From a photograph, Copyright 1923, by W. L. Dawson

as early as the first of September. By October there is a fair sprinkling of this species in most harbor-haunting or coastwise flock of gulls, but the local status of the species is incessantly changing. Much depends upon weather conditions in southern Alaska and British Columbia. A storm or a cold snap as late as January will bring thousands of gulls of this and allied species hurrying down from the North, and may quite alter the complexion of the local gull fauna.

Many birds attach themselves to coastwise vessels, and some few follow faithfully from Eureka to San Francisco, or from the Bay Cities to San Diego. Vessels plying to Portland and Puget Sound ports put further out to sea, and so lose their Larine super-cargoes, but as they approach the Golden Gate they are greeted by waiting crews of these enthusiastic and hungry servitors. When not dancing in close attendance upon ships, the gulls move extensively along the coastline at the dictation of the prevailing wind. Even in midwinter, when the birds would prefer to remain in the South, they seem to have no choice but to breast the wind, and so will move up the coast hundreds of miles in a day, if the wind is from the west or northwest. They work their way down coast again in calm weather, or else breast the south wind. In migratory flight, or when

Taken in Santa Barbara County *Photo by the Author*

FOLLOWING THE PLOW

challenged thus by the wind, the gulls follow by preference either in dead air just off the cliffs, or else immediately above the cliff-line, as needs may require. None are more expert than Captain Argentatus in judging wind values, or in covering a flaw made by an indentation of the cliff-line. The predilection which the moving birds show for the cliff-line is the photographer's opportunity. He has but to conceal himself in some cliff-hung barranca and take pictorial toll to his heart's content. And certainly there is nothing in all nature more enchanting, more enviable, or more artistically compelling than a company of sea-gulls faring splendidly northward in the face of a merry piping gale.

No. 276

California Gull

A. O. U. No. 53. **Larus californicus** Lawrence.

Description.—*Adult:* Mantle deep pearl-gray (decidedly darker than in *argentatus;* tip of wing (six outer primaries) chiefly black; the black of 1st primary interrupted near tip by blotch of white about two inches in length (in some specimens subterminal black deleted, i. e., tip entirely white), shaft of feather white in this portion, area of white decreasing on inner web; 2nd primary less extensively blotched with white, forming in the exposed wing with the preceding a wedge-shaped area of white, largest anteriorly, shaft of this quill black throughout; tips of all white; black disappearing in small subterminal bar of 6th; invasion by basal white not too rapid as in *argentatus*, coming within two inches of tip of 5th primary; remaining plumage pure white. *In winter* streaked and clouded with brownish dusky on crown, cervix, and neck all around. Bill yellow, crossed subterminally by a broken band of black (thus effecting the transition to *L. delawarensis*, from which it is distinguished by a heavy vermilion patch on gonys; irides brown; feet and tarsi greenish gray or yellowish gray. *Young, first and second years:* In general, mottled brownish gray and white, much as in preceding species, but back and wings more highly variegated in grays of three shades; chin and throat dull whitish, very lightly or scarcely streaked; wing-quills and tail brownish black (averaging much darker in tone than that of *L. argentatus*). Bill yellow at base, abruptly black-tipped. *Transition plumages:* as before; a subterminal bar of black on bill being the last juvenile character to disappear. *Measurements:* Length of adult 482.6-584.2 (19.00-23.00). Av. of 10 Monterey specimens: length 508 (20.00); wing 404 (15.91); tail 148.3 (5.84); bill 46.3 (1.82); depth at angle 15 (.59); depth at nostril 14.3 (.56); tarsus 57.4 (2.26).

Recognition Marks.—Small gull size; *feet greenish gray* (distinguishing from all but *delawarensis*, which is lighter gray as to mantle, and more extensively black as to beak; and from *brachyrhynchus*, which is smaller with relatively smaller beak); large wedge-shaped spot of white near tip of wing; otherwise much like *argentatus*, which at its maximum it closely approaches in size.

Nesting.—Of weeds, grasses, and a few feathers, on the ground. *Eggs:* 3 (4 of record); as in Western Gull, but more variable. Av. of 40 specimens in M. C. O.

Portrait of California Gull

From a photograph by the Author

Taken on Paoha

coll.: 65.3 x 44.2 (2.57 x 1.74); index 66.6; range 56.6-71.9 by 34.3-47 (2.23-2.83 by 1.35-1.85). *Season:* May–June; one brood.

General Range.—Western North America, breeding in the interior from eastern California, Nevada, and North Dakota, north to northern Mackenzie. Occurs during migrations along the Pacific Coast from British Columbia southward, less commonly in the interior east to Colorado, Kansas, and Texas. Winters chiefly along the coast of California and south to southern Mexico; also casually north to Puget Sound.

Distribution in California.—Common winter resident along the coast, being especially common in the harbors and in attendance on shipping. Present more or less casually upon inland waters after the close of the breeding season. Breeds in large colonies upon islands of the larger lakes, from Mono north. Also, formerly, in the Sacramento River.

Authorities.—**Lawrence** (*Larus californicus*), Ann. Lyc. Nat. Hist. N. Y., vol. vi., 1854, p. 79 (orig. desc.; type locality, Stockton); *Townsend*, Proc. U. S. Nat. Mus., vol. x., 1887, p. 191 (Eagle Lake, breeding); *Finley*, Condor, vol. ix., 1907, p. 12, figs. (Klamath Lake, breeding); *H. C. Bryant*, Condor, vol. xxi., 1919, p. 127 (eating earthworms).

Taken in Washington *Photo by the Author*

A WELTER OF WINGS

GULLS fill a large place not alone in the "economy of nature" but in the affections and economics of men. Latterly the envy and despair of the automotive engineer, the way of a gull both afoot and aloft has always intrigued the admiration of human kind. Little naked savages, foregathered with their elders about some reeking clam stew, have darted at them ever and again and have pelted them with futile stones, and then fallen silent as the birds chanted their runes of hungry protest, or winged securely aloft in scorn of tribal happenings. Fishermen for a thousand centuries have alternately wrangled and fraternized with them, now brandishing an oar in impotent rage, and now flinging a largess of fish in wondering obedience to some higher law of pity. The picnicking tourist, lolling on a southern beach, marks the passing legions of the air with squinting eyes, or else bestirs himself to offer refreshment, a neglected sandwich or a surplus bun. The artist and the poet, too, chief of na-

Taken on Paoha Island — *Photo by the Author*

LARUS CALIFORNICUS

ture's appraisers, mark these fluent notes of white-and-flesh-and-gray and smear them upon canvass, or weave them into distiches, according to their kind. And last of all, plain mortals, who know not exactly why they are glad at the seashore, and care not so they are so, these borrow also of the gull the fuel of those unquestioned fires of average content. And though we may appraise the blueness of waters and the brightness of skies and the genial warmth of sands, it is, after all, the gulls and their kind who give the crowning touch of life to any littoral scene.

The Pacific shores in winter are highly favored by an abundant and a would-be friendly host of northern pilgrims, among them gulls of eight or nine varieties. And of these the California Gull is most closely attached to the ferry boats of the Bay Cities and to the coastwise steamers which ply from Crescent City to San Diego. These gulls play pilot, hovering angel, and passenger, by turns; and often, for the sheer humor of the thing, trail doggedly behind, as though flying, forsooth, were hard work.

The gulls take a lively interest in the passengers, but it is the cook who has the key to the gull heart. It is for his sake alone that the birds have forsworn the sunny beaches and have attached themselves to the caravels of commerce.

> "He may live without love—what is passion but pining?
> But where is the *gull* that can live without dining?"

If you would cultivate gull society, fee the galley for a loaf of bread and smuggle it up surreptitiously to the hurricane deck, well aft. Now for some fun! The hungry horde weaves to and fro, forward and back, up and down and around, mewing expectantly like a litter of kittens at milking time. Hold up a piece of bread and the pace becomes furious. "Please! please! please!" they cry, until their mandibles fairly quiver with eagerness. But none snatches it from your hand; they are too well disciplined in the treacherous ways of men for that. When at last the bit is flung—instant silence. Every gray bolt is launched at the falling bread and the water where it must pause. Crash! And the clamor bursts out afresh, for the luckless many must voice their disappointment while the lucky one gulps down the prize and hurries back for more.

Gulls do not ordinarily dive, for they are light as corks. They snatch their food rather from the surface of the water. If there is plenty, as when the cook dumps the accumulated leavings from the captain's table, the gulls settle gracefully upon the water and throw the morsels down by rapidly succeeding jets of the head.

Taken in Seattle *Photo by the Author*

SUCCESS

The more experienced birds learn to catch bread on the wing, and the disclosure of such ability guarantees its owner a full meal. It is no small trick to catch a bit of flying bread in the teeth of the wind, for it is sometimes a nice fraction of a second between the bestowing hand and the bird's beak.

Long before the bread gives out, you have been seized afresh with wonder at the mystery of that gliding flight. Graceful, effortless, untiring, but above all mysterious, is that power of propulsion by which the bird moves forward into the teeth of the gale,—indeed, is advanced all the more certainly and freely when the wind is strong. From the deck of a steamer making fifteen miles an hour against a fifteen knot breeze, I once stretched my hand toward a soaring gull. He lay suspended in midair without the flutter of a feather, while the air rushed past him at the rate of thirty miles an hour; and he maintained the same relative position to my hand, at five or six feet, for about a minute. When he tired

Taken in Seattle *Photo by the Author*

DREAMS

of the game, he shot forward. And again, there was not in the motion the slightest perceptible effort of propulsion, but only a slightly sharper inclination of the body and wings downward.

This challenging mystery of effortless flight has found a rational explanation at last. Theoretically, at least, automotive engineers have come to realize that the propulsive thrust whereby the bird is driven against and through the very wind which impels it, is due to the perfection of the stream-lining of the bird's body and wings. Just as a fresh watermelon seed escapes from the pressed thumb and finger, so a bird's wing, squeezed above and below by the resolving elements of the wind, shoots forward. These are deep waters for a layman, but I have discoursed with a reputable engineer who claims to have produced models wherein the frontal resistance is reduced to four per cent (of the normally opposed flat surface), and who dreams of an airplane so cunningly contrived that the frontal resistance will be transferred to the *minus side of the account.* Such a machine could fly faster against an opposing wind than with it, and given a sufficient elevation to guard against air holes or momentary imperfections in balancing, could advance against the wind (and only so)

without power. Thus we shall have acquired by laborious mastery what the birds have as a free gift.

But to get back to those gulls we are watching. Forward and back, to and fro, and around—why, Hello! There's a bird without any feet. Won't he have a hard time of it though! And now—why, there's another! Not a vestige! The immaculate feathers close over the footless stumps and betray no sign of their presence. The wind is searching, and Mr. Gull, who does not approve of chilblains, kicks his yellow feet one at a time under the white blanket of feathers provided by the under tail-coverts, and proceeds, footless, upon the mazy journey. What's the use of feet, anyway, when you have wings?

On the voyage, feet are useful only as the birds take turns at the mast-head, pausing for a moment with wings gracefully outstretched until they have mastered the motion of the boat. These stations on mast and flag-staff are jealously coveted, and the gull that would hold one must be vigilant in defense, or at least ready to bluff the aspirant with a mighty scowl. Otherwise a quick dab from behind will upset the dignified Burgomaster, balance, dignity, and all. But who may comprehend by epithet or episode the unflagging charm of the white-winged fleet,—now in the van leading away with brave impudence, now registering a retreat with far-flung shadows on the smoke-stack, now trailing laboriously in the wake, like faithful hounds in leash. What humility of supplication! What perfect independence! What condescension of grace! What boundless exultation of wings, *wings*, WINGS! Oh, who would not give hands and feet for wings! Is it any wonder that the lure of the air has caught us, and that we are still offering up the lives of our best and bravest upon the altar of progressive "achievement"?

Taken in Washington *Photo by the Author*

A FLOCK OF HYDROPLANES

Taken in Mono County *Photo by the Author*

THE WEST NESTING: PAOHA ISLAND

Space will fail us before we can tell of the migration of the California Gull, of its extensive distribution at these seasons throughout the State, and of its partiality for the mud flats and undisturbed loafing places. We cannot speak at length of the birds' fondness for an evening or midday stroll through the skies, nor of the diligence with which they wait upon the plow and gather up grubs and earthworms. These traits the California Gull shares with certain other species, although this species stands preëminent among them as the farmer's assistant. One observer has reported[1] a specimen whose stomach contents consisted of black crickets and three whole meadow-mice. And it was to a colony of California Gulls, I believe, that the early Mormons owed their "providential" deliverance from a scourge of black crickets. At any rate the grateful children of these pioneers have commemorated such an occurrence in the famous gull monument in Salt Lake City.

We are in haste, rather, to get at these birds in their summer haunts, for our sojourn with them will be too brief at best. Doubtless in the very early days the California Gulls bred much more extensively upon the island fastnesses of our larger lakes than they do at present. One large colony, at least, is known to have persisted at a shifting station somewhere in the

[1] H. C. Ohl in Calif. Fish and Game, Vol. 2, No. 4, p. 218.

middle stretches of the Sacramento River until within very recent years. Cooke,[1] quoting Finley, states that they breed on Lower Klamath Lake (in Oregon) and at Clear Lake. They have been found nesting in small numbers at Lake Tahoe and on Eagle Lake. But the classical home nesting-ground of the California Gull is Mono Lake. It was the author's privilege to visit this spot in June, 1919, and the following account chiefly involves observations made at that time.

Mono Lake is a sheet of water some eighty-five square miles in extent, which lies about midway of the State at the eastern foot of the Sierras, at an elevation of over 6400 feet, and which stretches away to the eastward into unreclaimed desert. Its waters are strongly impregnated with potash, sodium sulphate, and other salts, and are, of course, not potable. In spite of this handicap, they swarm with "a small Branchipus-like Phyllopod," and the larvæ of a certain fly. The former are ghostly pale creatures, which appear more like deserted casts than objects still animate. Yet it is upon these and the myriad flies which gather at the water's edge that the teeming bird life of the region must feed. The expanse of the lake is broken by two islands, Paoha and Negit. The former, which has a land surface of nearly two

[1] Wells W. Cooke, U. S. Dept. of Agriculture Bulletin No. 292, (1915), p. 41.

Taken in Mono County *Photo by the Author*

NEST AND EGGS OF CALIFORNIA GULL

Taken in Mono County *Photo by the Author*

A HAUGHTY COPPER

square miles, is a low-lying sharply-rolling expanse of stratified materials, chiefly volcanic ash, sparsely covered with atriplex and other typically desert vegetation. The northern third of the island, however, is eruptive, the extreme tip being an almost impassable welter of recently cooled lava of a reddish black color. Negit Island is another example of the same eruptive movement, and stands hard by, a grim red sentinel, fit only for the tenure of hardy sea fowl.

Through the courtesy of the owner of Paoha, Mr. W. D. McPherson, who is transforming this desert principality into a model goat-farm, we were privileged to visit the two colonies of California Gulls on Paoha and the main colony on Negit. In the "lagoon colony" we found, on the 3rd day of June, 250 pairs of birds gathered upon the sloping banks of a small lagoon tributary to the lake. The birds rose as we approached but settled quickly and did not exhibit a great fear of our presence. It was a critical time in the gull calendar, for the eggs were hatching, and we felt impelled to make our reconnaissance as brief as possible. The sun was burning hot, and the birds had availed themselves as far as possible of the scanty cover of atriplex and artemisia in the location of their nests. The nests were in many instances mere shallow depressions in the earth,

but they varied from this negligence, or haste, up to elaborate structures an inch or more in thickness, composed of twigs, frayed stems and bark of atriplex or sage, and especially of feathers.

At the Black Rocks colony on Paoha we found a very different physical setting. The point consists of an exceedingly rough lava field whose cooling surface has been eroded into most fantastic forms of knob and minaret,—a veritable devil's post-pile. The lower hollows have in many instances been filled up by a combination of pumice and guano, and these false floors, in many places undermined by the rising waters of the lake, would suddenly give way beneath our feet.

Nesting was for the most part conducted along a strip within twenty feet of the water, and on a ridge a hundred yards in length, which projected itself into the water. Some minor detached rocks had tenants, and a gravel bar at the extreme tip of the island was crowded. Some birds had placed their nests so near the water's edge that the rise, very rapid,

Taken on Paoha Island *Photo by the Author*

SCENE IN THE BLACK ROCKS NESTING COLONY

they say, during the past month, had engulfed them. Nesting material being more difficult to procure in this section, most linings were of the scantiest, and few were seen which excited our cupidity.

As in the other colony, the season was near the hatching point, and perhaps one-third of the eggs were pipped.

The census conducted on the afternoon of the 3rd showed a total of 499 occupied nests, of which 10 with young (one or more), 64 singles, 290 twos, 134 threes, and one four. Again, the number of nests which contained two eggs exceeded all others put together, and outnumbered the threes, two to one. A few more nests, ten or a dozen, were noted on the

Taken on Paoha Island *Photo by the Author*

MATING TIME

following day in an outlying colony. To this total of over 500 pairs should probably be added 100 for those overlooked, hatched out, or destroyed, a total for the colony of 600 pairs, and for the island of 850.

On the occasion of a second visit to the Black Rock colony, we heard gull voices from Negit, half or three quarters of a mile distant. Accordingly, we importuned Mr. McPherson for passage, and were allowed three riotous hours upon the island on the following day (June 5th). We found here on the east point of Negit Island the most populous colony of all. Because our visit took place at high noon, and because fully half the eggs were either hatched out or were in the act of hatching, we made a very hasty survey and neither attempted to cover the whole ground nor

California Gulls at Paoha

From a photograph by the Author

Taken in Mono County

to count the nests. An outlying ridge of rock, barely severed from the main shore, we did not visit at all, although it was crowded with birds.

The shore line at this place sloped rather sharply for, say, two-thirds of the distance occupied by the colony, running from the water's edge up to forty feet; but there was also a considerable flat which was densely covered with breeding birds. The shore here, although of volcanic origin, was largely covered with rounded rocks, probably water-worn, and further mitigated by the guanos of long occupation.

The variety of eggs presented was bewitching (the motif of our visit was chiefly oölogical), but we were shut out of fully three-fourths of our preferences by the fact that the eggs were near hatching. Of two sets of four, for example, those of one were pipped, and the others, though taken, presented only "tops" when finished. Significantly, the number of fresh or savable eggs among the twos outnumbered those among the threes, ten to one. In fact, there was scarcely a set of three found which we could be sure of saving in perfect condition. This leads quickly to the suspicion that sets of two represent for the most part *second attempts* on the part of those whose previous attempts have for one reason or another proved futile. That this is not altogether the case is, of course, abundantly proven by the number of twos ready to hatch. Many of the ones, in like manner, were perfectly fresh, the beginning of new sets; but others, as certainly, were actually "sets," and placed in nests which were intended to hold no more.

Taken in Mono County CALIFORNIA BABIES *Photo by the Author*

One suspects further that a deficiency in the normal number of eggs

is partly due to destruction by rivals. It is easy to filch one egg out of a nest while the owner's back is turned; and from the fierce squabbling which goes on every time there is a re-settlement of the winged hosts, I am led to fear that every exposed egg has to be defended by its rightful owner if it is to survive.

As I reviewed the matter later (seated in a pine grove at Mammoth—the first moment of notarial leisure allowed in that strenuous season) a

Taken in Mono County *Photo by the Author*

ALARM AT NEGIT

gentle melancholy took possession of me—a regret that all this intensity of living could not have been better seized upon—this furious kaleidoscope of life caught red-handed and transmitted dripping to the page. Perhaps the camera will do that—or what is the camera? A mere mechanism whose record also requires to be interpreted, to be sympathetically considered, in other words, to be *lived*. And there was life at an intense node—a thousand irate fathers beating the air with futile wing, and venting their rage in incomprehensible cackles and kawks, while a thousand anxious mothers hovered or settled by turns, their hearts wrung by the importunities of a thousand chicks in very moment of entering this bubbling

world. Oh, it is a tragic time, when you think of it! A thousand births in a day in a single community, and another thousand expected on the morrow. Little time and scant welcome for visitors on such a day. Prudence and good sense bid an early retirement, and I wish I had seen less rather than more.

But what an armed truce is there also! Call it a "community"? To be sure the birds crowd together as close as they dare, and they act together in facing a common foe. But why do they crowd together? For every beak is turned against every other beak, and the space between nests is guaranteed in every instance to be greater than the distance which can be bridged by two craning necks tipped by two pairs of hostile mandibles. Crabbed tempers have these California Gulls, and the brandished beak is the sign of welcome and the notice of departure to any other of their own kind save their wedded partners, and not infrequently to them also. In conspicuous exception to this churlish behavior, I recall two birds whom we dubbed "the lovers," which during the whole period of our review (I was changing plates under the most awkward circumstances at the Black Rocks colony), stood side by side with their bodies in actual contact (such as birds rarely allow), the very picture of amiability. Perhaps gull nature varies as much as human nature, and there are happy exceptions to the universal grouch.

A close student of comparative psychology or of the comparative philology of gulls would have profited by a week's residence among these birds. In general, I may say that the appearance and behavior of these

Taken in Mono County *Photo by the Author*

THE PEACEFUL ISLES

Taken in Mono County *Photo by the Author*

A WINGED COMMOTION

California Gulls was not conspicuously different from those of Western Gulls or Glaucous-wings under like circumstances. In fact, I suspect that a critical study of the notes of these species would reveal an exact parallelism; and that all the major expressions could be identified or referred to a provincial modification of speech,—an accent rather than something generically different.

Among the notes two occasioned special interest, one a gulping note of protest, which sounded absurdly like *hellp*; the other a crone-like objurgation in solemn, measured tones to which the whole tribe listened. This, too, was uttered with the mandibles almost closed; and its utterance, so different in cadence and quality from anything else heard in the entire babel of sound, made a strong impression. Among them all, certain voices, or it may be special sounds, came out on occasion with the tone of authority. For example, at a time when most of the birds had returned to their eggs and were sitting uneasily upon them, and during an unceasing medley of protest or anxiety, would come a certain note which would cause the entire colony to leap into the air, although we had done nothing whatever, at least at that particular moment, to excite fear. It might have been

something in the timing of its appearance, or something in the psychological stress of its author, which gave this note its sudden compulsion.

Among the breeding birds we noted the presence of several individuals not quite mature, as evidenced by a distinct trace, or an indistinct hue, of black on the tail. I am inclined to believe, however, that these birds were admitted into full fellowship, and that they were breeding.

Taken in Seattle *From a photograph, copyright 1908, by W. L. Dawson*

TO ARMS!

No. 277

Ring-billed Gull

A. O. U. No. 54. **Larus delawarensis** Ord.

Description.—*Adult in summer:* Mantle pearl-gray (typical "Gull-blue," a shade lighter than in *L. argentatus*); extent and pattern of black on wing-tip much as in preceding species; area of subterminal white "wedge" reduced—extent on 1st primary about one inch or less, its traversing shaft black; corresponding area wanting on 2nd primary, or if present appearing as rounded spot on inner web; white tips reduced, usually wanting on 1st and often on 2nd; remaining plumage white. Bill greenish yellow, crossed at angle by a broad and clearly defined black band; feet light yellow or greenish; eyelids vermilion, iris pale yellow. *Adult in winter:* Similar, but cheeks, crown, hind-neck, and sides of neck (narrowly) sharply streaked or spotted with dusky. *First year birds* are nebulated light brownish gray and whitish, with early appearance of pearl-gray on back; quills and tail dusky, blackening distally. Bill black, lightening basally. *Second year birds* are white below with light spotting of brownish dusky on breast and sides; the head pattern is largely that of the adult in winter; the wing-tips retain their nondescript blackish character, while the tail is chiefly light bluish gray, more or less mottled with blackish, and crossed by a definite broad subterminal band of black. Bill, basal half yellow, terminal half black. This species attains maturity in three years, thus "saving" a year over the foregoing larger forms. Length 457.2-508 (18.00-20.00); wing 368.3 (14.50); tail 152.4 (6.00); bill 40.6 (1.60); tarsus 55.9 (2.20).

Recognition Marks.—Crow size, but appearing larger; mantle "gull-blue"; black band across bill at angle; feet greenish yellow (thereby easily distinguishable from all others, save *L. californicus* and *Larus canus brachyrhynchus*). Along the coast narrowly confined to the beach proper.

Taken on Lower Klamath Lake *Photo by W. L. Finley and H. T. Bohlman*

GENERAL ALARM

CALIFORNIA AND RING-BILLED GULLS AND WHITE PELICANS SHOWING

Nesting.—Not certainly known to breed in California. *Nest:* On the ground, of broken-down reeds and grasses, or on summit of musk-rat houses, old grebe nests, and the like. *Eggs:* 2 or 3; colored as in other species. Av. size 61 x 43 (2.40 x 1.70). *Season:* June; one brood.

General Range.—Temperate North America. Breeds in the interior from southern Oregon, Utah (Salt Lake), Colorado, North Dakota, northern Michigan and Quebec north to southern Ungava, central Keewatin, southern Mackenzie (Great Slave Lake). South in migrations over the whole United States to Cuba and Mexico.

Distribution in California.—Common winter visitant and resident along the coast from Tomales Bay southward. Common on all interior bodies of water during migrations. Stragglers present throughout the year on many lakes and ponds.

Authorities.—Bruch (*Larus occidentalis*), Jour. Fur. Orn., 1853, p. 101, pl. ii., fig. 20 (Calif.); *Henshaw*, Auk, vol. ii., 1885, p. 232 (Santa Barbara to San Diego); *Willett*, Pac. Coast Avifauna, no. 7. 1912, p. 14 (s. Calif., winter; dates of arrival and departure).

AS FOR the Ring-bill, the ocean's edge is his domain—in winter. Winter, to be sure, is a polite fiction in southern California, a verbal counter which we retain merely for the sake of squaring our reckoning with that of the unfortunate "East." Or it is a scarecrow word which we love to

bandy mockingly while we are taking our Christmas dip in the surf. Winter or summer, it is all the same to us. But ornithologically speaking, winter has a technical, though often very elastic, sense. It may include autumn and spring, though never summer. Winter, to be exact, is that season, be it short or long, which migratory birds are pleased to spend in the South. The Ring-billed Gulls "winter" for eight or nine months on the coast of southern California from Monterey southward, and, more rarely, upon the larger lakes.

Their choice of the "wash line" is very definite. Their accepted function is to inspect the offering of each last wave. And although they do not fare to and fro with the agility of Sanderlings, it is your Ring-bill, rather than any other species of Gull, who makes first discoveries, and who plays the major role of scavenger, in that "priest-like task of pure ablution round Earth's human shores." And because the line of contact between earth and ocean is really very narrow, the Ring-billed Gulls are as likely to be found singly, or in twos and threes, as in companies. When patrolling, they march along stiffly with an affected, prancing gait, having often an appearance of hauteur, which their mild eyes and timid retreats belie. With one eye on shoreward dangers they, nevertheless, make sudden snatches at the sand, resuming with a jerk an exaggerated uprightness which countervails the lapse. Left to themselves, they will some-

Taken in Santa Barbara *Photo by the Author*

THE OCEAN'S EDGE IS HIS DOMAIN

PORTRAIT OF RING-BILLED GULL

Taken in Santa Barbara *Photo by the Author*
"THEY MARCH ALONG STIFFLY"

times breast the wave with uplifted wings, eager to seize the incoming dainties. And if flight be necessary, it is always down the beach slope with a run which takes them to the water's edge. In this fashion one may drive a shifting company of Ring-bills before him for hours, yet without learning very much of their habits.

Proceeding once along a beach road which paralleled a northern inlet, as the tide neared the flood, I caught sight of a newly-arrived company of these Gulls upon an outer reef. Noting a bar midway between them and the beach, to which they would be likely to retire if not alarmed, I stole up to a sheltered spot commanding a view of the latter location. Here at close range I had the satisfaction of seeing the birds alight gracefully one by one until a company of twenty-six awaited the last advances of the tide. One member of the flock had his suspicions of the dark object ashore, and published them from time to time in a high-pitched note of protest. In uttering this the bird first thrust his head forward with mandibles far apart, and began squealing. This noise he continued with increasing volume, while throwing his head straight up, and then further, like a dog baying the moon. In subsiding, he came to "position" again, and ended by droning a lower and finer note, with mandibles either slightly ajar or closed outright. Without further retreat the flock awaited quietly the oncoming of the tide, and allowed it to lift them, like stranded boats, clear of their anchorage, after which they swam slowly out to sea.

Although rated as the "Common Gull" of the Great Lakes and the Atlantic seaboard, and recorded, rightly enough, as "common in winter along the coast of southern California" there is a singular dearth of positive information regarding this prosaic bird. Its comings and goings have

been noted in a perfunctory way, but of its life history, its peculiarities, its individual flavor, there are none to speak. One suspects that the surest way to condemn a bird to obscurity is to dub it common. That epithet is a notice that its bearer is no longer worthy of consideration; and the amateur avoids it as he would an abandoned mine.

There are, however, two fairly good reasons for this oversight in the case of the Ring-billed Gull in California. In the first place its appearance lacks distinctive character. The bird is obscure, nondescript, average, "mejum," just gull. Even the supposedly distinctive character of the black band upon the beak is not easily made out at a distance. Many gulls, especially immature ones, have black upon the bill. In the second place—and this is the secret, I think—the Ring-bill is the wariest of our wintering gulls. His habitual exposure at the water's edge has from time immemorial made him conscious of hostile notice. Hence it is that with the distant approach of a pilgrim on the strand, your Ring-bill gets uneasy and begins to edge off down the line, or else withdraws outright from the stupid company of Californias and Westerns. Thus the casual observer gets an impression of rarity which is belied by the facts.

Taken on Lower Klamath Lake *Photo by William L. Finley and Herman T. Bohlman*

A MIXED COLONY—RING-BILLED AND CALIFORNIA GULLS

No. 278

Short-billed Gull

A. O. U. No. 55. **Larus canus brachyrhynchus** Richardson.

Synonym.—American Mew Gull.

Description.—*Adult in summer:* Mantle deep pearl-gray (about as in *L. californicus*); remaining plumage except quills white; pattern of black on wing-tip involving first six primaries, somewhat as in *L. californicus*, but reduced in area; subterminal white blotch on 1st primary two inches long, its included shaft white; that on 2nd primary about an inch long, its shaft black; intrusive gray of inner web on 3rd quill and inwards, changing to white distally; pattern of white tips as in *L. delawarensis*, i. e., wanting on 1st quill, present or not on 2nd. Bill slender, weak, without pronounced angle, greenish yellow, brightening (more yellow) on tip; feet and legs dull bluish green, webs yellow. In highest nuptial plumage the eyelids, edges of gape, and the tomia become bright orange-yellow, the bill hoary glaucescent on basal portion, the feet a brighter bluish green, the webs bright yellow; and a faint rosy flush sometimes appears on feathers of underparts. *Adults in winter:* Duller; the cheeks and crown streaked, the neck and breast mottled, and the cervix clouded or overlaid with brownish dusky. *First year plumage:* Chiefly brownish gray, heavily bordered on back and wings with fuscous and whitish; elsewhere nebulated or washed or cross-barred with whitish; quills and tail brownish dusky. Bill light basally, blackish terminally; feet and legs light yellow. Succeeding stages show early irruption of pearl-gray on back and progressive sequence of plumages, much as in *L. delawarensis;* subterminal bar of black distinguishable somewhat as in preceding. Intermediate examples also show tendency to bleaching wing-quills as (conspicuously) in *L. argentatus.* Length of adult: 419.1-457.2 (16.50-18.00); wing 355.6 (14.00); bill 36.8 (1.45); depth of bill at angle 11.4 (.45); tarsus 49.5 (1.95).

Recognition Marks.—Crow size; *small weak bill;* feet greenish yellow.

Nesting.—Does not breed in California. *Nest:* On ground of marsh; of moss, etc. *Eggs:* 2 or 3; colored as in other species. Av. size 57.2 x 40.6 (2.25 x 1.60).

Range of *Larus canus.*—The Northern Hemisphere.

Range of *L. c. brachyrhynchus.*—Breeding in northwestern North America from Athabasca Lake, southern Mackenzie, and the northwestern corner of British Columbia, west to Kotzebue Sound.

Distribution in California.—Fairly common winter resident coastwise, especially in harbors.

Authorities.—**Cooper,** Proc. Calif. Acad. Sci., vol. iv., 1868, p. 10 (San Francisco Bay); *Loomis*, Proc. Calif. Acad. Sci., ser. 2, vol. vi., 1896, p. 24 (Monterey Bay); *Oberholser*, Auk, vol. xxxvi., 1919, p. 83 (crit.; syst.).

A CERTAIN childish innocence and simplicity appears to distinguish these birds from the more sophisticated Californias and Westerns. They are the small fry of the great gull companies which throng our borders in winter, allowed to share, indeed, when Pietro dumps a rich load of restaurant waste, but expected to take a grumbling back seat when the

supply of food is more limited. One may see at a glance that they are not fitted for competition. Their bills are not only shorter, but much more delicately proportioned than those of the other gulls; while their gabbling, duck-like notes oppose a mild alto to the screams and high trumpetings of their larger congeners.

Gulls of this and allied species are quick to appreciate the advantages of protected areas. Along the water front, or near steamers, where shooting would not be allowed, they become very bold. Short-bills, however, do not stand about on palings, and piles, and roofs, as do the Westerns, but rest, instead, almost exclusively on the water. Thus, if one attempts to bait the gulls with an offering of bread laid on the wharf-rail, the larger gulls will begin to line the neighboring rails and posts, craning their necks hungrily, or snatching exposed fragments; but the Short-bills will settle upon the water and draw near to the piling below, content to catch such crumbs as fall from the high-set table.

Taken in Washington
Photo by the Author
"HOVERING DOVES"

Away from the city the gulls become increasingly wary, for no other reason than that sneaks with guns will do what the law forbids, as often as they think themselves safe from observation. Once a gull is killed or wounded, its companions hover about it with piteous cries, momentarily forgetful of their own danger, or indifferent to it, as they urge their fallen comrade to escape. This sympathetic trait is, of course, taken advantage of by the Fourth-of-July sportsman (?), whose only requirements are noise and something to shoot at.

Gregariousness admits of every degree, from the momentary exhibition of sympathy, or the chance assemblage of hawks in migration, to those perfectly timed evolutions of sandpeeps or sparrows which are at once our admiration and our despair. The larger species of gulls foregather closely at nesting time or struggle *en masse* at the garbage dump; but in flight they are independent or only casual in their associations. The smaller species, on the other hand, sometimes exhibit genuine flock impulses. Such an example I once beheld at Santa Barbara, where a flock of some 200 of these Mews, all immature, lay off-shore under a strong breeze. Something frightened them and, rising upon the instant *en masse*, they moved off in close order, wheeled and turned, and presently settled again with a discipline as perfect as that displayed by a flock of plovers. Some feathered Wellington must have had that youthful

Taken in Washington *Photo by the Author*
SHORT-BILLED GULLS IN HARBOR

cohort in training; but if so, I could not discern his epaulets nor mark his shouted orders.

The Short-billed Gull returns to Alaska in May, at which season, according to Mr. Nelson, its soft white plumage is shaded with a delicate rose-color. "It is a marsh-loving species, and is rarely found near the bold promontories and capes which delight the Kittiwakes. Frequenting all the flat marshy country of the coast and interior, they are found nesting from the peninsula of Alaska north to the head of Kotzebue Sound, and from this sea-coast region they breed interiorly over Alaska and northern British America."

No. 279

Franklin's Gull

A. O. U. No. 59. **Chroicocephalus franklini** (Swainson and Richardson).

Description.—*Adults in summer* (sexes alike).—Head and upper portion of neck plain slate-blackish or dusky purplish gray, more slaty anteriorly; an elongated white spot on each eyelid; lower neck (all around), entire underparts, lower rump, and upper tail-coverts immaculate white, the neck and underparts more or less deeply suffused with eosine pink, especially in living or recently killed specimens; back, scapulars, wings, and upper part of rump uniform neutral gray, the tertials and secondaries broadly tipped with white; five outer primaries with a subterminal space of black, varying in extent from about 50 mm. on the second (from outside) to about 12.5 mm. on the fifth, and tipped with white, these white tips varying in extent from about 38 mm. on the outermost to less than 12 mm. on the rest, the gray of basal portion on all becoming white or nearly so distally, next to the black subterminal area, the shafts white except within the latter; remaining (proximal) primaries lighter gray, broadly, but not abruptly, tipped with white, the sixth (from outside) sometimes with a subterminal bar or spot of black; tail white, the four to six middle rectrices tinged with pale gray, especially the middle pair; bill deep red with a more or less distinct subter-

minal band of darker red; iris dark brown; naked orbital ring, legs, and feet, deep red. *Adults in winter:* Similar to summer adults but head and whole neck white, the occipital, auricular, and orbital regions dusky grayish; bill and feet darker red, the former tipped with orange-reddish. *Young:* Pileum and sides of head (except forehead and lores), back and scapulars grayish brown, the longer scapulars margined terminally with pale grayish buff; wing-coverts gray, more or less tinged with brown; secondaries dusky edged with pale gray and broadly tipped with white; primaries dusky, the proximal ones more grayish, all rather broadly tipped with white; tail pale gray or grayish white with a broad subterminal band of blackish; central portion of rump pale gray, the lateral and posterior portions, together with upper tail-coverts and entire under parts, lores, forehead, and eyelids white; bill brownish, the tip dusky; legs and feet brownish (in dried skins)."—Ridgway. Length of adult about 355.6 (14.00); wing 290 (11.42); tail 104 (4.10); bill 32.5 (1.28); tarsus 41 (1.61).

Recognition Marks.—Tern size; resemblance to Bonaparte's Gull (*C. philadelphia*) fairly close; red beak (instead of black) distinctive for adult; wing pattern quite different, more like the larger gulls. Immature plumages require expert analysis.

Nesting.—Does not breed in California. *Nest:* A bulky platform or truncated pyramid of dead rushes, placed on broken-down rushes, or in shallow water of marsh, often floating. *Eggs:* 3; "normal gull type," but averaging darker in tone. Av. size 53.85 x 36.8 (2.12 x 1.45). *Season:* June.

General Range.—North and South America, breeding from South Dakota and Minnesota north to Manitoba, Saskatchewan, and Alberta. South in winter from Gulf coast of Louisiana and Texas to Peru and Chile. Accidental in California, Utah, Ohio, Ontario, Virginia, and the Lesser Antilles.

Occurrence in California.—Rare or casual during migrations. *Immature birds* taken at Hyperion, Nov. 22, 1913; Oct. 17, 1914; and Nov. 24, 1914, by J. Eugene Law; Oct. 29, 1917, by L. E. Wyman.

Authorities.—Law (*Larus franklini*), Condor, vol. xvii., 1915, p. 96; *Wyman*, Condor, vol. xx., p. 192.

OUR KNOWLEDGE of this gull as a bird of California is based solely on fall specimens taken by Messrs. Law and Wyman at Sewer Mouth, *alias* Hyperion, in Los Angeles County. Franklin's Gull is essentially a bird of the northern interior, breeding in the Dakotas, Manitoba, and Saskatchewan; and it usually finds its way down the Mississippi Valley in the autumn, and so *via* Mexico to the coast of Peru. The four specimens taken were all immatures of the first year, and their discrimination from the attendant swarms of Bonaparte Gulls was an astute piece of work on the part of two of California's most prominent ornithologists. Hyperion has become a recognized port of call for all migrating *Laridæ*, but it remains to be seen whether *C. franklini* is a regular visitant.

No. 280

Bonaparte's Gull

A. O. U. No. 60. **Chroicocephalus philadelphia** (Ord).

Synonyms.—Sea Pigeon. Bonaparte's Rosy Gull.

Description.—*Adult in summer:* Head including throat blackish slate, mantle pearl-gray; primaries extensively white, the first six with black terminal portions, the third to sixth, in addition, narrowly tipped with white; the first quill with outer web and tip black, the second and third altogether white with black tips, the fourth white on outer web, pearl-gray on inner web, with touch of white at extremity of terminal black, effecting the transition to the nearly uniform basal pearl-gray of inner primaries; remaining plumage pure white, the underparts more or less flushed with pale rosy. Bill jet black; feet and legs rich orange-red, with black nails; feathering of eyelids white posteriorly, the skin carmine. *Adult in winter:* Without the black hood; a dab of slate behind the ear and another before the eye, with a plumbeous suffusion of occiput instead; rosy tint of underparts wanting; bill lighter basally, and feet pale flesh-color. *Immature:* Like adult in winter, but plumbeous suffusion of hind-head more extensive and tinged with brownish; the pearl-gray of mantle less distinct and varied by brownish gray; lesser wing-coverts and inner tertials mostly brownish gray; primaries mostly blackish on exposed outer webs, where the adult is white, and white on outer webs of inner primaries, where adult is pearl-gray; the inner primaries narrowly tipped with white as before; tail crossed terminally, or nearly so, with a broad band of blackish or brownish dusky; bill still lighter, but blackish toward tip. *First plumage:* Much as in immature, but crown, cervix, sides of neck and back, plumbeous dusky varied by brownish gray; feet still lighter. Length of adult: 304.8-355.6 (12.00-14.00); av. of 10 Monterey and Alaskan specimens: wing 268 (10.55); tail 101.2 (3.98); bill 28.4 (1.12); depth at angle 6.6 (.26); tarsus 35.3 (1.39).

Recognition Marks.—Little hawk size; with Sabine's, smallest of local gulls; size of Common Tern (*Sterna hirundo*); head black in breeding plumage; bill black or mostly black; mantle gull-blue; primaries mostly white and gull-blue, tipped with black and very narrowly with white. To be told at a glance from the terns by its shorter, squarish tail, and in breeding plumage by head being black *all around*. For comparison with *Xema sabini* see under next species.

Nesting.—Does not breed in California. *Nest:* Of sticks, lined with grass, etc.; placed four to twenty feet high in bushes, trees, or on stumps, or in default of such upon high ground in marsh. *Eggs:* 3; rarely 4: olive-gray, greenish olive-gray, or brown, with smallish spots or blotches of umber and violet-gray, chiefly about larger end. Av. size 48.3 x 33 (1.90 x 1.30).

General Range.—North America. Breeds from northern British Columbia, north in Alaska, Yukon, and northern Mackenzie. South in migrations over practically the entire continent to the southern states, Lower California, and northern Mexico. Winters north to South Carolina, and sparingly to Washington.

Distribution in California.—Abundant during migration along the seacoast, and casually throughout the interior. Winters commonly along the coast north to Monterey and more sparingly northward in suitable harbors.

Bonaparte's Gull

About 3/7 life size

Authorities.—Lawrence (*Chroicocephalus philadelphia*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 852 (San Diego, Petaluma, etc.); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 14 (s. Calif.; migr. dates, etc.); *Dwight*, Auk, vol. xxxvii., 1920, p. 265 (plumages and molts).

Taken in Santa Barbara *Photo by the Author*

CIRCE

BONAPARTE GULL IN WINTER DRESS

"NATURE PHOTOGRAPHY" is really a phase of the collector's mania. The devotee of the camera becomes so thoroughly obsessed with the idea of "taking" everything he sees, that he cannot sit still and enjoy the largess of nature. In the early days of the autochrome we even felt uneasy in the presence of a sunset, and while others were drinking in the glories of a crimson West, we grumbled at the absence of our favorite "gun." It is not alone a temporary enjoyment that one misses either,—a surrender to beauty's self, untainted by professional appraisal. The intent photographer, following the movements of his subject, jockeying for position, computing exposure schedules, fearing momentary flight, has not time for accurate observation nor for notebook work. Science and Art conflict here, and though each may serve the other through the finished product, the photograph, the pursuit of bird portraits in itself is a thoroughly engrossing and non-scientific pursuit.

It is for this reason that the author offers herewith a gallery of

Taken in Santa Barbara *Photo by the Author*

FALLEN ANGELS
ATTENDANTS ON THE OUTFALL SEWER

portraits (more or less extensive "according to style and binding"), and confesses that he knows nothing more about the Bonaparte Gull than he did fourteen years ago when the following lines were penned:

A more peaceful scene could scarcely be conjured up by the imagination than that of a company of Bonaparte Gulls resting at high tide. Some sixty of them sit before me now on a miniature boom of radiating logs, and I am spying on them from the shelter of a deserted cannery. The windward logs break the force of the tiny waves which are running before a gentle breeze, and provide an oasis of calm. In this glassy space a few birds, mostly late comers, are bathing and otherwise disporting themselves; but most of the company sit placidly upon the logs in dainty rows, or doze with head tucked under wing. A few terns, hardly distinguishable at this distance from their square-tailed kinsmen, are allowed to share this haven of refuge, and no distinctions of courtesy are made. Now and then there is a little jostling, as some newcomer, fresh from his bath, demands admission to the ranks, and a squabble in low-pitched tones, not unlike the grunting of little pigs, ensues; but the difficulty is soon adjusted and peace reigns supreme.

Bonaparte Gull on the Estero, Santa Barbara

From a photograph, Copyright 1912, by W. L. Dawson

Taken in Santa Barbara A WATERFRONT SPECIMEN *Photo by the Author*

Like most pygmies, the Bonapartes are very sociable creatures, and they not only foregather with their fellows to the number of thousands, but they associate more or less in flocks at all times, and are so often moved by common impulse that they merit the name "Sea Pigeons," frequently applied to them. In spring Bonaparte is the very devil of a fellow, and would be set down at sight as a lady-killer, were it not for the fact that his good wife, present or prospective, is similarly attired. You see, by way of preparation for nuptials, this bird thrusts its head half way into a pot of black paint. And because the paint is very black (Oh, well, "plumbeous slate," then; but that is black enough, surely) he shuts his eyes *very* tight and saves a space above and below untouched by the pigment. And then he, or she, bears upon the breast at this season a rosy blush, which alone would be enough to proclaim the nearness of mating time.

When the Bonapartes return, however, reaching, as they do, our northern borders late in July, they are doffing their black head gear, and they soon look as babyish and innocent as ever.

Birds of this species have no liking for the steerage fare afforded by the cities, but they gather extensively upon the tide-flats, where they pursue marine worms and tiny crustaceans. They are not less fond of

Taken in Santa Barbara *Photo by the Author*

THE VOLUCRY CHARGES

kelp-beds or open water, and they have an especial liking for tide channels, where there is great bustle of fishy traffic, and where a fellow can catch a ride now and then on a floating soap-box—outbound or inbound, it matters not.

Now a brother sights a school of herring and sets up a joyful yelp. Instantly every "pigeon" within hearing joins him, and scores come hurrying up from unseen distances, till the water is white with them. The discreet fishlets have gone below, and the gulls are left to spin about on the surface, looking foolish, or to gabble amicably with their similarly duped neighbors. After all, nothing matters in good society.

I have only to add, with regret, that Bonapartian manners have suffered a sad decline, of late, or at least in the Southland. "Hyperion" has no more devoted pensioners than these same Sea Pigeons; while the submerged outlet of the trunk sewer at Santa Barbara, which was for so

Taken in Santa Barbara *Photo by the Author*

BONAPARTE'S SOLDIERS

Group of Bonaparte Gulls

Two birds in nuptial plumage

From a photograph, Copyright 1923, by W. L. Dawson

Taken in Santa Barbara

Taken in Santa Barbara *Photo by the Author*

FISHING

long a time a disgrace to the town, was invariably marked by a hovering host of these depraved fairies. But convention will excuse anything, as witness the costume of the bathing beach half a mile to westward. If ladies may discard their clothing, or most of it, and "get away with it," we will not pause to rebuke a bird for reverting to fashions still more ancient.

And apropos of mob psychology (in other words, fashion), I am reminded of the great consternation caused by the appearance of a Duck Hawk over an assembly of Bonaparte Gulls upon the beach at Orella. The Gulls rose in terror and kept together in a dense mass, each bird, apparently, determined to keep in the center out of harm's way. Some day—oh just *some* day—I'd like to see the Archangel Gabriel appearing suddenly over the bathing beach!

Taken in Santa Barbara *Photo by the Author*

A FASHIONABLE WATERING PLACE

NOTE THE APPEARANCE OF BIRDS IN NUPTIAL PLUMAGE

No. 281

Heermann's Gull

A. O. U. No. 57. **Blasipus heermanni** (Cassin).

Synonym.—White-headed Gull.

Description.—*Adult in breeding plumage:* Mantle plumbeous-slate; head and neck shading into deep ashy gray of remaining plumage; upper tail-coverts light ashy; greater wing-coverts and tertials tipped with ashy and whitish; wing-quills and tail black, the latter broadly, the former (except 1st and 2nd primaries) narrowly, tipped with white. Bill rich vermilion, tipped narrowly with black; feet and legs reddish black. *Adult in winter:* Head and neck lightly streaked with dusky. *Young of the year:* Entire plumage sooty brown, lightening on throat, blackening on quills and tail; a little whitish skirting below, more on wing-coverts; also, or not, tail faintly white-tipped. Bill (drying) yellowish at base. *Immature:* Mingled sooty and plumbeous; head darker and more uniform sooty blackish in contrast with cervix, but throat white; no white on quills or tail. Bill dull orange basally, black at tip. Probably attains maturity the third year. Length of adult: 444.5-533.4 (17.50-21.00); wing 342.9 (13.50); bill 44.5 (1.75); depth at angle 14 (.55); tarsus 55.9 (2.20).

Recognition Marks.—Crow size; black and vermilion beak; dark body plumage unmistakable in any feather; mellow notes.

Nesting.—Does not breed in California. *Nest:* A mere depression in loose soil, unlined. *Eggs:* 2 or 3; of somewhat lighter coloration than "normal gull type," and more finely spotted. Av. of 28 eggs in M. C. O. coll.: 59.3 x 41.9 (2.335 x 1.65); index 71. *Season:* c. April 8.

General Range.—Coasts of western North America. Breeds in March and April on the Tres Marias Islands near Tepic, and upon islands in the Gulf of California, north at least to Ildefonso. At other seasons ranges north along the seacoast to Vancouver Island and the Gulf of Georgia.

Distribution in California.—More or less common along the coasts and harbors throughout the year, but numbers greatly augmented in early winter by the return of northern tourists, and depleted in early spring by withdrawal of breeding birds.

Authorities.—**Cassin** (*Larus heermanni*), Proc. Acad. Nat. Sci. Phila., vol. vi., 1852, p. 187 (orig. desc.; type locality, San Diego); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 28 (s. Calif. ids.); *Willett*, Condor, vol. xx., 1918, p. 122, fig. (aberrant wing markings).

A-OWNH ownh ownh ownh! A-ownh ownh ownh ownh ownh! They are southern voices that are speaking, and the notes produce a pleasing complex of impression, for they are sometimes drawling and indolent, in spite of their accelerando cadence, and they are mellow and limpid, for all of their nasal twang or their underlying suggestion of feline moroseness. You have offended the dignity of an orderly meeting, and these are protests. This ledgeful of dark birds, which you have just disturbed by your thoughtless approach, is none other than the August

Heermann's Gull

Nearly ¼ life size

Taken in California *Photo by W. L. Finley*

HEERMANN GULLS, ADULTS AND IMMATURE

Conclave of Ancient Loafers, the sun-warmed, surf-soothed, pelican-fed concatenation of incorrigible indolents. "The night is for sleep and the day is for rest," says the Heermann Gull, who, being a Mexican (in spite of his German name, which is no fault of his), knows something of Spanish proverbs.

It is permitted to loaf, in the Southland,—to loaf and to invite one's soul. The Swift does not see it all, nor yet Jenny Wren, always a-flutter. Who but a Heermann Gull, sitting tranquil on a timber hard by, could have shared such a vision of beauty as came to me once on a Redondo pier! Gazing northward, we viewed the breakers lengthwise, as they broke under a burning sun upon a perfect shore. There was a stiff breeze outside, so that the billow, fleeing under the lash of its master, suddenly encountered an area of immovable air. A sheet of spray would be torn from the crest of the incoming comber, and this would flash into a splendor of prismatic light. And the spectacle was more beautiful than that of a mere rainbow, for this Triton's crest would exhibit only one color at a time, a single hue of the immortal seven, raised to some electric shade of diaphanous brilliancy. Moreover, the illuminated mist changed color by sudden leaps in its shoreward progress, as though it were traversing the field of some heavenly spotlight, the defractive area of a prism de luxe, so large that it had to be served up to the human eye on the instalment plan. The commonest shade I caught was a lumiere green, or viridine, an instant vision of budding springtime

Taken in Santa Barbara *Photo by the Author*

A GRACEFUL LOITERER

which set the nerves a-tingling, but which itself gave way to a screeching autumnal hue, before one could analyze the ecstasy. Another mood was palest amethyst, or virgin violet, subtle beyond the spell of words. This I saw in bewildering succession and ecstatic repetition, and seized my notebook, the while—Sir Gull—he took a nap.

This bird might perhaps be more accurately named the Kelp Gull, for it is in the kelp-beds, so abundant off our shores, that it finds its congenial home and feeding ground. Ensnared in the meshes of the plant are many bits of wreckage, mill-waste, or pieces of driftwood, upon which the gulls are fond of riding. Here, too, the gulls find shrimps, which, according to Linton, form an important element in *heermanni*'s bill of fare. The bird is fond also of the smaller fish, and earns its rests by agility here. As Anthony says: "When herring are swimming in compact schools near the surface both Heermann's and Western Gulls secure them by approaching the school from behind and flying near the surface of the water, making repeated quick dips into the school. The fish seek safety in the depths the instant anything occurs to alarm them, but soon return to the surface, so that the gulls by stalking them from the rear are enabled to approach quite near before the fish are alarmed. As soon as the limits of the school have been passed, the gull, rising higher

Heermann Gulls

From a photograph by the Author

Taken in Santa Barbara

in the air, returns by a wide circuit and again passes over the school from the rear. As the fish all swim in one direction, in a compact mass, these tactics afford the gulls a decided advantage which seems to be thoroughly understood."

Dr. J. G. Cooper, an early observer, was among the first to note the parasitic habits of this gull. He says: "Though quite rapid in flight, and well able to supply themselves with food, they have a curious habit of 'sponging' on the pelicans and large gulls. Often a long train of pelicans is seen, as the tide is rising, slowly wandering round the bay, each one attended by one or more of these gulls, which are usually some distance behind. Whenever a pelican awkwardly plunges into the water and emerges with its enormous scoop-net full of fish, its parasites are sure to be ready and fearlessly seize the fish from its very jaws, the stupid bird never resenting the insult, or appearing to take the least notice of the little pilferer, which it could easily rid itself of by one blow, or even swallow alive."

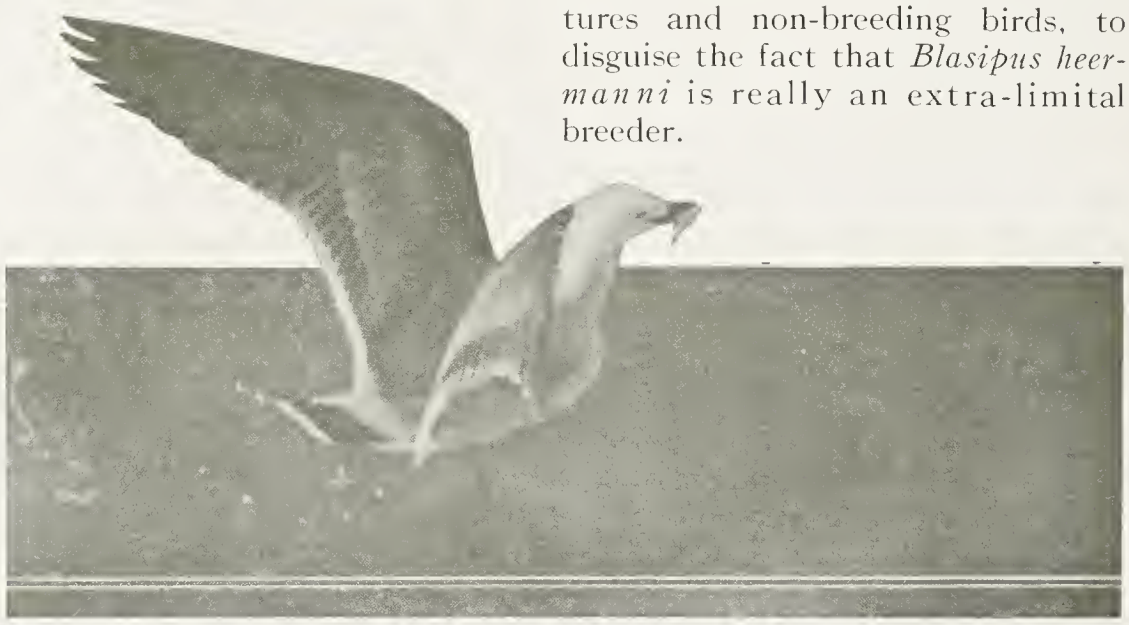
The Heermann Gull is our most conspicuous example of what we call reverse migration. That is, it goes south instead of north to breed.

Taken at La Jolla *Photo by the Author*

THE AUGUST CONCLAVE OF ANCIENT LOAFERS

Its breeding haunts, known to include certain islands off the coast of Lower California and western Mexico, have only recently come to light, and are not yet very fully mapped out. The largest colony yet described is that of Ildefonso Island in the Gulf of California, in Latitude 26° 38′ north, where, in 1909, W. W. Brown, Jr., estimated that 2500 pairs were nesting. Nesting takes place in March and early April, so that by the last week in May returning migrants, having completed the duties of reproduction, begin to appear along the coast of southern California. There is a steady increase in numbers till July, at which time, and after, this species outnumbers the native Westerns (*Larus occidentalis*) two to one in southern waters. The migratory movement persists throughout the summer and carries many of the species as far north as British Columbia; but in general it may be affirmed that they are present in a steadily decreasing ratio anywhere north of Monterey. Heermann Gulls are a little clannish, and are likely to flock by themselves even when sharing their resting places with other species. Their relations with the Western Gull, however, are most familiar, and they are to be found pretty much wherever *occidentalis* goes, save that they will not go far inshore nor under any circumstances venture "cross lots" to visit interior waters.

By the end of January adult birds have assumed white heads, which mark the breeding plumage, and have begun to forsake Californian waters. Yet there always remain behind a sufficient number of stragglers, immatures and non-breeding birds, to disguise the fact that *Blasipus heermanni* is really an extra-limital breeder.



Taken at Redondo Beach *Photo by the Author*

A TROPHY

No. 282

Sabine's Gull

A. O. U. No. 62. **Xema sabini** (Sabine).

Synonym.—Fork-tailed Gull.

Description.—*Adult in summer:* Head and neck all around plumbeous-slate, bordered posteriorly with black; mantle dark pearl-gray; upper border of wing black; exposed primaries chiefly black, the inner ones changing to white marked with plumbeous, the first six with white tips and increasing white on the inner webs; remaining plumage, including slightly forked tail, white. Bill black, tipped with yellow; legs and feet black; eyelids orange. *Adult in winter:* Similar, but slaty color of head and neck reduced to ear-coverts and nuchal region; rest of head and neck white. *Young:* Above, including most of head and mantle, grayish brown, each feather darkening distally and tipped with buffy; tail white, with a broad blackish subterminal band; forehead, lores, upper tail-coverts, and underparts white. Emargination of tail about 1.25; that of young not much less (Coues). Length 330.2-355.6 (13.00-14.00). Average of 10 Monterey specimens: length (skins) 336.2 (13.24); wing 282.9 (11.14); tail 119 (4.69); bill 26.3 (1.035); depth at angle 7.5 (.295); tarsus 35.2 (1.386).

Recognition Marks.—Little hawk size. Black of wings and slate of head and neck more extensive than in *C. philadelphia;* bill black with yellow tip; tail slightly forked; the black ring bordering the slate of head and upper neck all around is also distinctive.

Nesting.—Does not breed in California. *Nest:* A depression in tundra moss, sand-beach, or bare earth. *Eggs:* 2 or 3; buffy olive, marked with brownish olive and sepia. Av. size 43.7 x 30.5 (1.72 x 1.20). *Season:* June–July.

General Range.—The Arctic regions south irregularly to the coast of Peru. Breeds in the Yukon delta, on St. Lawrence Island, along the coast of Mackenzie, and locally on several islands of the American Arctic, and along the west coast of Greenland; also in Siberia at least upon the Taimyr Peninsula. From these centers of dispersion the birds visit other Arctic and sub-Arctic regions at the close of the breeding season, and straggle southward. Migrates chiefly well off shore along the Pacific Coast of America to Cape San Lucas, thence directly (?) to Peru. Occurs irregularly during migrations over the greater part of the United States to the Texas coast.

Occurrence in California.—Apparently a regular spring and fall migrant on the ocean. Usually keeps well off shore, but occasionally straggles to land (Santa Barbara, Aug. 25, 1915; El Cajon, Oct. 10, 1920), and has occurred far inland (Mono Lake, Sept. 1901, Fisher).

Authorities.—**W. E. Bryant** (*Xema sabinii*), Zoe, vol. iii., 1892, p. 165 (San Francisco Bay); *W. K. Fisher*, Condor, vol. iv., 1902, p. 10 (Mono Lake); *Beck*, Proc. Calif. Acad. Sci., ser. 4, vol. iii., 1910, p. 63 (Monterey Bay).

THE OFF-SHORE life of California is a sealed book to most of us. Something of its rich and varied interest has been hinted by the investigations of Leverett M. Loomis and of Rollo H. Beck near Monterey. Now and then a fortunate yachtsman, like Howard Wright of Pasadena, teases our imagination by reports of Sabine Gulls and other rarities seen on the

waters adjacent to the Channel Islands. But of the great tides of life which annually or semi-annually surge upon and down our coast, we know almost nothing. It is only when a reckless Larine sailor, a juvenile most likely, puts into port that we hail the "record" and flatter ourselves with an increase of knowledge. Or again, some luckless wight, forespent with storms, pays tribute to mortality and wills his carcass to some beach-prowling ornithologist. It is by such devious glimpses that we guess that Sabine Gulls skirt our borders by tens of thousands—early and rapidly in May; early and slowly on the return in August, or, more tardily, till October. Off-shore records abound but they are only records of glimpses.

Sabine's Gull, although pretty careful to avoid the shore as such, is, nevertheless, a poor marksman in aiming his southern flight. There are casual records of its migratory appearance from almost every state in the Union; and Colorado has almost come to expect annual visitations. There are, however, only three or four records of coastal contact in California, and one from the interior, Mono Lake, by W. K. Fisher. A young bird with a dark mantle seen at Santa Barbara on the 27th of August, 1915, was examined under binoculars, but not shot. The forked tail, which is the distinguishing character of this species, appeared, as the bird squatted in the mud and tilted the member in preening, displaying at the same time a terminal black band which is a sign of immaturity. The hinder edges of the wings were extensively white, so that the bird in flying produced a momentary impression of likeness to a Willet. The "face" was extensively white, giving way to a nondescript dusky, like that of the mantle.

Of the occurrence of this bird upon its northern breeding grounds Nelson has left us the best account: "Sabine's Gull has a single harsh, grating, but not loud note, very similar to the grating cry of the Arctic Tern, but somewhat harsher and shorter. When wounded and pursued or captured it utters the same note in a much higher and louder key, with such grating file-like intensity that one feels like stopping his ears. It has the same peculiar clicking interruptions which are so characteristic of the cry of a small bat held in the hand. A low, chattering modification of this is heard at times as the birds gather about the border of a favorite pool, or float gracefully in company over the surface of some grassy-bordered pond. The same note, in a higher key, serves as a note of alarm and curiosity as they circle overhead or fly off when disturbed. When one of these gulls is brought down, the others of its kind hover over it, but show less devotion than is usually exhibited by the terns.

"On June 13, 1880, about 20 miles from Saint Michaels, while egging in company with some Eskimo, we found a pond some 200 yards across,

in the middle of which were two small islands. A gunshot caused at least one hundred of these gulls to rise like a white cloud over the islet, and showed us that we had found a breeding place. As we stood on the shore a few birds came off, and circling close about us for a few moments, but rarely making any outcry, returned to the island, where the others had already settled again and appeared to be sitting upon the ground. The water of the lake we found to be about waist-deep, under which lay a solid bed of ice of unknown depth.

"The smallest island lay nearest, and sending one of my men out to it he found a set of two eggs of the Black-throated Loon, one set of the Arctic Tern's eggs, and two of Sabine's Gull. Proceeding to the next island he found a set of *Aythya marila nearctica* eggs as he stepped ashore, and a moment later cried out that the ground was covered with gulls' eggs. At the same time he answered with chattering teeth that the water in the lake was very cold. Having never seen the nest of this gull I called my man back and he transported me upon his back to the island after narrowly escaping several falls on the way. The island was very low, and the driest spots were but little above the water. Built upon the driest places were twenty-seven nests, containing from one to three eggs each, and as many others just ready for occupancy.

"While I was securing my prizes the birds hovered overhead in great anxiety, although they rarely uttered their grating cry, and in the very few instances when a bird darted down at us it was in perfect silence. While we were on the island several Glaucous Gulls and Jaegers passed by, and in every case they were attacked by several of the *Xemas* and driven hastily away."[1]

No. 283

Caspian Tern

A. O. U. No. 64. **Hydroprogne caspia** (Pallas).

Description.—*Adult in spring:* Top of head and nape uniform lustrous black; upperparts pearl-gray, whitening somewhat on rump and posteriorly; wing-quills not especially different, the silvery gray nearly concealing dusky on exposed portions; inner webs plain grayish dusky; *tail slightly forked* for about one-fifth of its length,—folded wings considerably exceeding; remaining plumage white. Bill very stout,—the depth at base being nearly equal to one-third the length of culmen,—bright coral-red,

[1] "Nat. Hist. Coll. in Alaska," E. W. Nelson, pp. 57-58.

slightly tinged with dusky at tip; feet and legs black. *Adult after breeding season and in winter:* Similar, but black of crown speckled or streaked with dull white. *Young:* Black cap of adult represented by spotting on top of head (on grayish white ground), increasing in density until nearly uniform on hind head; above dull pearl-gray, sparingly spotted or barred with brownish dusky; primaries darker than in adult; tail pearl-gray with dusky subterminal spots, or indistinct barring; remaining plumage white, bill orange-red; feet brownish black. Length 508-584.2 (20.00-23.00); wing 412 (16.25); tail 127-165.1 (5.00-6.50); bill 69.85 (2.75); depth at base of bill 20.3-24.1 (.80-.95); tarsus 45.7 (1.80).

Recognition Marks.—Crow to gull size, largest of the terns; heavy bill and general tern characters distinctive for size; frequents lakes and interior marshes rather than seacoast; harsh guttural notes.

Nesting.—Not known to breed in California. *Nest:* A mere depression in gravel or sand. *Eggs:* 2 or 3; pale olive-buff or olive-buff, finely and rather sparingly round-spotted with sepia and buffy olive, brownish olive, and with violet-gray under-shell markings. Av. size 62.2 x 43.2 (2.45 x 1.70).

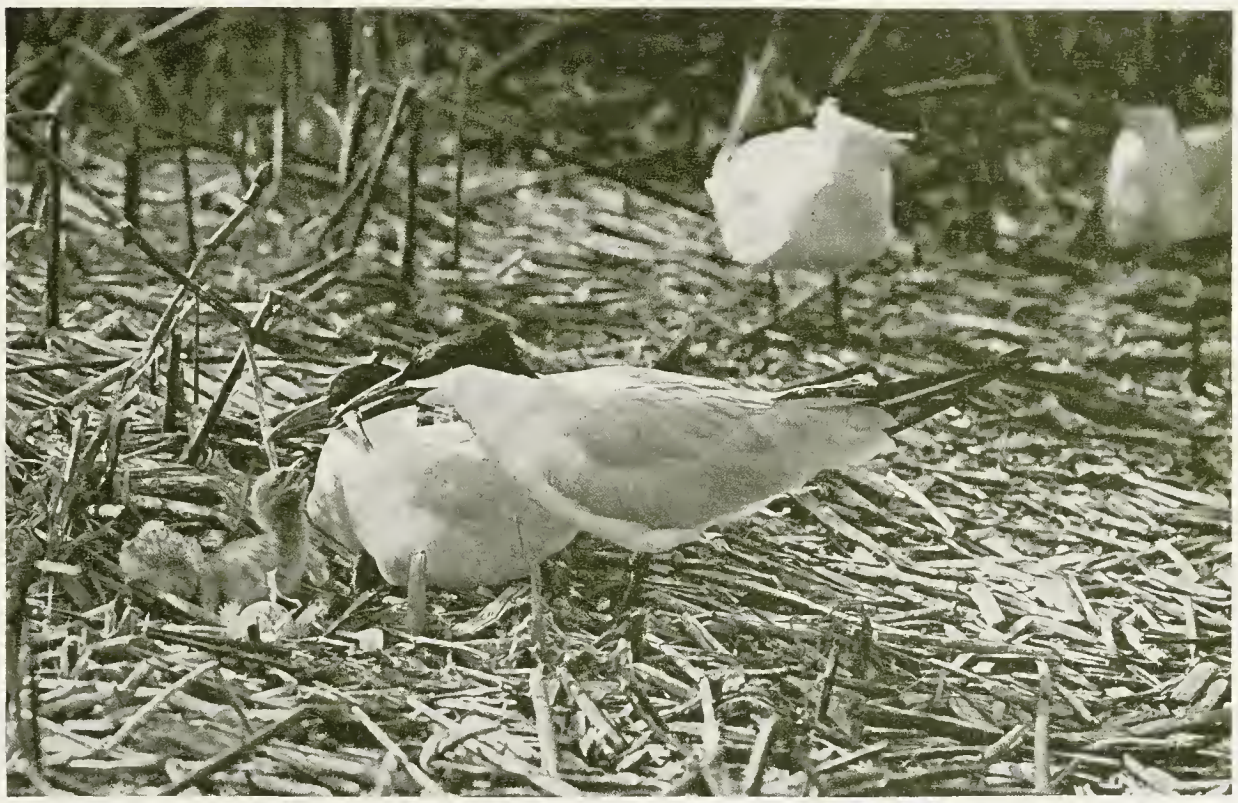
General Range.—Nearly cosmopolitan, but not recorded from Greenland, Iceland, Japan, and Oceanica, nor from the continent of South America. In America breeds very locally and in widely separated colonies, in part as follows: mouth of the Mackenzie, Great Slave Lake, coast of southern Labrador and islands of Newfoundland, Gravel and Gull Islands in northern Lake Michigan, Klamath Lake in southern Oregon, Cobb's Island, Virginia, South Carolina and the Gulf States. Also breeds in Albania, on islands in the Caspian Sea and the Persian Gulf, the mouth of the Zambezi River, and (in isolated pairs, *fide* Campbell) about the coasts and estuaries of Australia and New Zealand. In America migrates (or wanders at the close of the breeding season) to the lower Yukon Valley and James Bay. Winters south along the South Atlantic and Gulf Coasts, and from California to western Mexico.

Occurrence in California.—Not common migrant and rare winter resident both coastwise and interiorly. Non-breeding birds linger about the northern lakes in summer and records of former breeding are very probable.

Authorities.—Ridgway (*Sterna regia*), Bull. Nutt. Orn. Club, vol. vi., 1881, p. 124 (Stockton and San Francisco); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 15 (occurrence in s. Calif.); *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 23 (occurrence in Calif.).

WE ARE doubtless slaves to nomenclature. Careers have been made or marred by early choice of names, avian no less than human. By no possibility could we think of this sturdy giant among Terns as a "Native Son," even if it bred in California as plentifully as it does in Oregon. For 150 years this species has borne the name Caspian, and that for practical purposes is equivalent to alien. But also the distinction is not unjust. *Caspia* is a foreigner. The Caspian Tern is cosmopolitan; and Cosmopolitan Tern would perhaps have been a better name for it. A cosmopolitan species is necessarily a rigid, non-plastic species. It has arrived. Its habits are established. If it is no longer characterized by aggressiveness, it has at least nothing to fear. It has made its peace with varied conditions and has achieved a static goal.

It is impossible, for a sensitive person at least, to escape a sort of awe in the presence of one of these world travelers. He has seen so many skies, and weathered so many storms, and tasted so many viands, and thought so many thoughts. He is, as a consequence, as alert as he is placid, as independent as he is tolerant, and above all things, self-reliant and capable. This may sound like fanciful stuff for appreciation of a bird, but the root of it is there in the dynamic of the species, even if the individual escapes recognition.



Taken on Lower Klamath Lake *Photo by William L. Finley and Herman T. Bohlman*

HOME LIFE OF THE CASPIAN TERN

The Caspian Tern is known on our borders as a casual sort of a migrant and an occasional winter resident. Its appearance may be instantly recognized from its tern-like character; and as surely distinguished by its stouter, more gull-like proportions, its heavy red beak, and its shorter, squarer tail. Its voice, too, is heavier than that of any other tern, and by this especially it betrays its foreign breeding. On critical occasions, or as mere apprisal, the bird utters a snarling croak, *jay awk'* or *snay owk'*, which we are willing, without debate, to set down as Russian.

In carriage the Caspian Tern does not differ especially from its fellow *Sternæ*. It frequents lakes, ponds, water-courses, and brackish lagoons during the migrations, or else parallels the sea-coast in its major flights. It quarters the waters with down-turned beak, like any other Tern, and it foregathers with its Larine fellows on the sunny beaches, or at the mouths of estuaries. Surface fishes form its almost exclusive diet, these and a sample or two, during the breeding season, of baby terns of the lesser sorts.

Taken on Lower Klamath Lake *Photo by W. L. Finley and H. T. Bohlman*
A BREEDING COLONY OF CASPIAN TERNS

As a breeding bird the Caspian Tern has succeeded in building up a dual reputation. Some describe the birds as solitary nesters, while others give circumstantial accounts of crowded colonies. Both traditions, are, of course, correct, and this adaptability to local circumstances has doubtless guaranteed the cosmopolitanism of the race. For example, the species is found only in isolated pairs on the headlands and outlying islands of Australia and New Zealand. Under such circumstances the male bird keeps a jealous watch over the surrounding country, and will threaten the approaching stranger by spirited swoops and harsh cries, though he be half a mile away from the spot where two or three eggs repose upon the bare shingle. Solitary pairs have likewise been seen at the mouth of the Mackenzie River, and the bird breeds in the Gulf of Bothnia, as it does also at the mouth of the Zambezi, and on the Yukon River as far up as St. Michael. A small colony of breeding birds was seen on the sand banks of "Adam's

Bridge" in Ceylon; and certain islands at the head of the Persian Gulf boast large colonies.

The Caspian Terns breed in colonies of considerable size upon certain of the federal reservations and elsewhere about the lakes of central Oregon. The story of the association of this species with *Larus californicus*, *L. delawarensis*, *Pelecanus erythrorhynchos*, and others, will make an epic of heroic proportions, but we will leave it to the skilled pen of Mr. Finley in a prospective and hopeful "Birds of Oregon." It is worth mention, though, that the American colonies of *H. caspia* seem to be permanently separated from those of the Old World, and that the American birds do not go further south in winter than about the middle of the Mexican coast. There is no record of the species from Central or South America.

No. 284

Royal Tern

A. O. U. No. 65. **Thalasseus maximus** (Boddaert).

Synonym.—Cayenne Tern.

Description.—*Adult in breeding plumage:* Top of head, narrowly, including eye, and lengthened occipital feathers, lustrous black; mantle pale pearl-blue, changing to white on rump and inner webs of tertials; exposed primaries chiefly blackish as to ground, but heavily plated with silvery gray, extensively white on concealed inner webs; tail, deeply forked, palest pearl-gray-tinged. Bill rich coral-red or orange-red, paling terminally; feet and legs black, soles yellow. *Adult in winter:* Similar, but forehead and lores chiefly white, and feathers of crown and nape decreasingly bordered with white; tail duller and lateral feathers reduced in length. *Young of the year:* Top of head much as in adult in winter, but occipital crest undeveloped; remaining upperparts chiefly white, or with irregular irruptions of pearl-gray, and marked with small brown spots on back, and especially the inner secondaries. Tail with plumbeous and brownish. Length of adult 457.2-506 (18.00-20.00); wing 355.6-381 (14.00-15.00); tail 152.4-203.2 (6.00-8.00); forked for 76.2-101.6 (3.00-4.00); bill 61.-69.9 (2.40-2.75); depth at base 20 (.79); tarsus 135 (5.32).

Recognition Marks.—Crow size, but much more elongated and graceful proportions; deeply forked tail and conspicuous red bill serve to distinguish from the gulls with which it is likely to be associated in winter; larger and with stouter bill than *T. elegans*.

Nesting.—Does not breed in California. *Nests* in colonies on bare sand or beach shingle. *Eggs:* 2 or 3, single in tropical latitudes; ovate, palest olive-buff to pinkish buff, boldly round-spotted or blotched or short-scrawled with black or brownish black, the spots often shadowed by tawny olive. Av. size 63.5 x 44.5 (2.50 x 1.75). *Season:* March–July, according to latitude; one brood.

The Royal Tern

General Range.—Coasts and islands of warm temperate and tropical zones in the Americas and west Africa. Breeds along the Atlantic and Gulf Coasts from Virginia (Cobb's Island) to Brazil and Argentina (?). Not certainly recorded as a breeder from the Pacific Coast, but probably does breed on islands in the Gulf of California. Occurs on the Pacific Coast from Tomales Bay, California, to Peru. Found also in winter along Atlantic Coast of Africa from Morocco to Angola.

Occurrence in California.—Irregularly common coastwise at any season, but chiefly in winter, north at least to Tomales Bay.

Authorities.—Lawrence (*Sterna regia*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 859 (Presidio; San Diego); *Nordhoff*, Auk, vol. xix., 1902, p. 213 (Elsinore Lake, Riverside Co.); *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 24 (occurrence in Calif.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 29 (s. Calif. ids.).

WE KNOW the Royal Tern chiefly as a loiterer and dreamer about our southern beaches and backwater bars. Its associations are rather with the gulls than with the lesser terns, and any established loafing place where gulls foregather is likely to harbor a group from ten to fifty strong of these demure "strikers." In addition to their lower draft (if one may apply the nautical term to birds ashore), their brilliant red beaks are sure to attract attention in any mixed company. A distant approach is regarded gravely—a black cap gives majesty a perpetual frown. There is some shifting of position, with a rolling gait, some consultation with friends, and then a desultory exodus sets in long before the stolid gulls have taken alarm. On those rare occasions when royalty speaks, one hears a high-pitched squeaking note, entirely out of keeping with the size of the bird, such as, by comparison with a Common Tern, one might rather expect from a Least.

The occurrence of the Royal Tern along our coasts is another example of reverse migration; i. e., of migration northward at the close of the breeding season. The bird is common enough, though never abundant, from September to May, as far north as San Francisco Bay; but it is never common in summer; and the few examples to be seen at that season may be confidently set down either as immatures or as sterile senescents.

This reverse migration of the Royal and Elegant Terns along the coast of the Californias is the more remarkable in that it contradicts the habit of eastern birds; for these breed north as far as the coast of Virginia (formerly to New Jersey) in June and July, and retire to the southward in middle September. Indeed, it is not impossible that the very birds which are hatched on Cobb's Island in Virginia forsake the Atlantic seaboard in the autumn, cross the Isthmus, and turn north to Monterey or south to Lima, as the case may be, for the winter. At any rate, we have no authentic account of the nesting of the Royal Tern in Pacific waters.

In its own person the Royal Tern bridges the gap between the monotokous terns of the tropics, and the more prolific breeders of the temperate zone, for in the southern portion of its breeding range, the West Indies, *T. maximus* deposits but a single egg on the bare sand, while in the Carolinas and in Virginia it lays two or even three eggs in a clutch.

Taken in Santa Barbara *Photo by the Author*

A FLIGHT OF ROYAL TERNS

No. 285

Elegant Tern

A. O. U. No. 66. **Thalasseus elegans** (Gambel).

Description.—*Adult in summer:* Very similar to preceding species, but smaller and with much slenderer bill; white of underparts flushed with rosy; wing pattern as in preceding (?) (So Coues; but the only Berkeley specimen, #18382, a male, taken at Monterey, Oct. 27, 1910, has the three outer primaries almost destitute of silvery —plain blackish instead); tail deeply forked, pure white. Bill bright red, changing to salmon on tip; feet and legs black. *Adult in winter:* Black of head reduced as in *T. maximus;* rosy flush of underparts reduced or wanting; tail marked with pearl-gray, not so long by an inch or so. *Young* said to resemble those of *T. maximus.* Length in summer up to 482.6 (19.00), of which tail 190.5 (7.50), forked 88.9 (3.50); in winter 406.4-431.8 (16.00-17.00), of which tail 133.3 (5.25), forked 63.5-76.2 (2.50-3.00); wing 317.5 (12.50); bill 63.5 (2.50); depth at base 12.7 (.50); tarsus 31.75 (1.25).

Recognition Marks.—Crow size; a middle-sized tern, to be distinguished from its smaller congeners by its relatively larger and longer, bright red bill, and from *T. maximus* by smaller size and much slenderer proportions of beak.

The Elegant Tern

Nesting.—Does not breed in California. *Nests* in colonies. *Egg:* Single, deposited on bare sand, highly variable as to ground-color, pale olive-buff, tilleul buff, or ivory-yellow to vinaceous buff and pinkish buff, spotted sparingly with black or sepia self-tones. Av. size 53.5 x 38 (2.10 x 1.50).

General Range.—Pacific Coast of the Americas, breeding (at least) on islands in the Gulf of California, and occurring south to Peru. Wandering north (at close of breeding season only?) to San Francisco Bay.

Occurrence in California.—"Rather uncommon and probably irregular fall visitant northward along the sea coast as far as San Francisco Bay. Definite stations and dates of occurrence: Pacific Beach (near San Diego), Sept. 21; vicinity of Morro [coast of San Luis Obispo County], Sept. 22–Oct. 4; Monterey Bay, Sept. 22–October 29; San Francisco Bay (date not recorded)"—Grinnell, 1919.

Authorities.—Cooper (*Thalasseus elegans*), Proc. Calif. Acad. Sci., vol. iv., 1868, p. 10 (San Francisco Bay); *Loomis*, Proc. Calif. Acad. Sci., ser. 3, Zool., vol. ii., 1900, p. 319 (Monterey); *Grinnell*, Condor, vol. xxi., 1919, p. 230 (Morro, San Luis Obispo Co., desc.; history of species in Calif.).

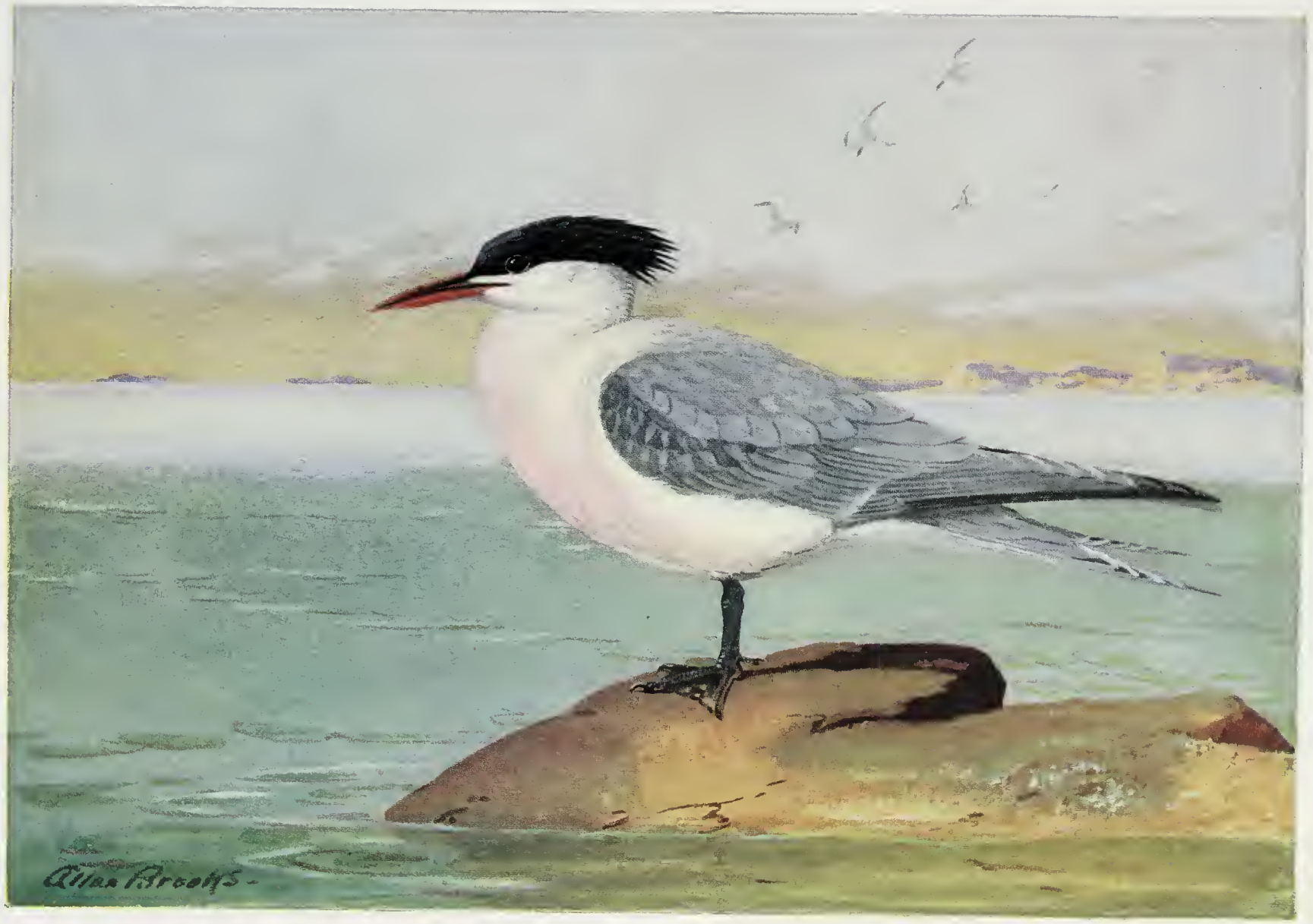
WITHOUT doubt the Elegant Tern is the Pacific analogue of the larger *maximus*, which has only recently invaded the ancient preserves of *elegans*. Elegance is only a smaller edition of Royalty, slimmer, trimmer, more graceful, and very much rarer along our coasts. It would be a rash authority who would publish "records" of this species based on observation alone, yet I feel fairly confident that we have seen it several times at Santa Barbara.

Dr. Joseph Grinnell, who with his associates, Messrs. White and Dixon, had a rare opportunity to study this species and to take specimens at Morro Bay, in San Luis Obispo County, concludes that there is no positive mark of field identification for the Elegant Tern, except its relative size when seen in company with Royals, or the lesser breeds, such as Forsters. The Elegants weigh almost exactly twice as much as the Forsters, but only half as much as the Royals, with whom they are most frequently associated.

The Elegant Tern breeds in large colonies, which establish themselves upon low-lying islands in the Gulf of California or off the lower coast of western Mexico. Single eggs, highly variegated, are rarely beautiful in markings, and are dropped upon the bare sand. Home is thus a mere contact with the ground, and the whole colony is likely to be devastated repeatedly by tropical storms before it is finally successful in its efforts to reproduce its kind.

Elegant Tern

Nearly ⅓ life size


Allan Brooks -

No. 286

Forster's Tern

A. O. U. No. 69. **Sterna forsteri** Nuttall.

Description.—*Adult in summer:* Top of head and nape sooty black; rump white, shading on upper tail-coverts; remaining upperparts pale pearl-gray; wing-quills dusky, heavily overlaid to tips with silvery gray, with ivory shafts, and with white (decreasing inwardly) on the inner webs; tail the color of back, deeply forked, the outer pair of feathers much elongated and tapering, reaching beyond the tip of the folded wing; *their inner webs of a much darker gray than the narrow outer webs;* underparts white; bill dull orange basally, the terminal half, or at least third, blackish; feet orange-red. *Adult in winter:* Similar, but black cap wanting, represented only by broad black stripe on side of head (including eye), and by grayish tinge of hind-head and nape; tail shorter and not so deeply forked, the outer feathers broader and less tapering. Bill duller, the dusky tip scarcely contrasting; feet dull reddish. Previous to renewal in the autumnal moult, most specimens have completely worn off the silver "plating" of the outer primaries; leaving them brownish dusky. *Young:* Like adult in winter, but upperparts extensively varied by or overlaid with light brownish; tail shorter, its feathers becoming dusky terminally. Length 355.6-406.4 (14.00-16.00); wing 254 (10.00); tail, the central feathers, 71.1 (2.80), the lateral pair 171.5-190.5 (6.75-7.50); bill 38.1 (1.50); depth at base 10.2 (.40); tarsus 24.9 (.98).

Recognition Marks.—Size of Common Tern; distinguishable from it by subtle but sure marks; the bill is stouter and more extensively black on terminal portion; the upper tail-coverts are grayer; the tail more deeply forked, and the outer pair of feathers dark on *inner* webs.

Nesting.— *Nest:* In scattered colonies, in marsh on low or partially inundated ground; a shallow, broad-skirted crater of interlaced grasses or sedges plucked green, occasionally of assorted drift materials. *Eggs:* 2 or 3; ovate; variable as to ground, greenish, olive-buff or pinkish olive-buff to dark olive-buff, yellowish glaucous, dull chamois, etc., handsomely spotted or blotched with black or brownish black, or with sepia self-tones and mold gray undershell markings. Av. of 12 sets in the M. C. O. coll.: 42.7 x 30 (1.67 x 1.18); index 71. *Season:* c. June 1st; one brood.

General Range.—North America. Breeds in the interior from northern Washington, Saskatchewan, and Manitoba, south to central California, Nevada, northern Colorado, northeastern Illinois, etc., and along the Atlantic and Gulf Coasts, locally, from New Jersey to Texas. Winters from the South Carolina and the Gulf Coast south to Guatemala and from southern California to Oaxaca.

Distribution in California.—Abundant spring and fall migrant especially coastwise. Breeds sparingly in suitable localities both east and west of the Sierras south at least to Los Banos (eggs taken May 23, 1914). Winters sparingly along the coast in the San Diegan district, and casually north to Stockton and Santa Cruz.

Authorities.—**Lawrence** (*Sterna forsteri*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 862 (Sacramento Valley); *Ray*, Condor, vol. v., 1903, p. 47 (Lake Tahoe, breeding; desc. nest and eggs); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 16 (status in s. Calif.); *McAtee*, U. S. Dept. Agric., Farmers' Bull. 497, 1912, p. 22 (food).

Taken in Merced County *Photo by the Author*
A SYLPH-LIKE CREATURE

FORSTERI, and not *hirundo*, is really the "common," middle-sized tern of California. Whether upon the interior lakes, where it reigns supreme, or upon the bars and beaches of southern California, it is the only member of the *forsteri—hirundo-paradisæa* group which the casual observer is likely to encounter. In migrations this species appears freely along the coasts, and it undoubtedly mingles more or less with migrating *hirundo*, for specimens of both species have been taken at a single discharge.[1] And yet we judge that *forsteri* does not occur so often nor so abundantly in the great off-shore movement, and that it exhibits a greater proprietary attachment than do the other species for the brackish lagoons and harbor bars.

As in the case of so many other shore-bird species, the migratory movement of *forsteri* is rapid and business-like in spring but more leisurely and diffused in the fall.

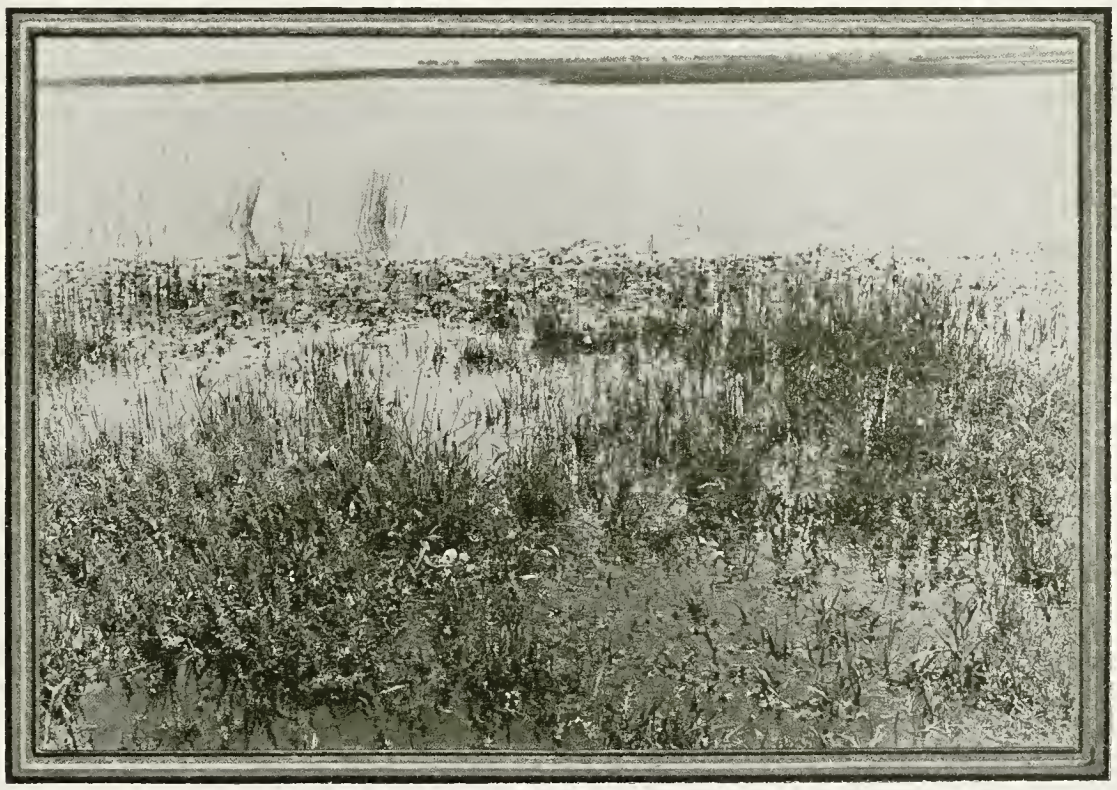
Forster's Tern is preëminently a marsh-loving species, and its summer range includes such of our larger lakes as have shallow borders, and the great overflow areas tributary to the San Joaquin and Sacramento rivers. The birds arrive in late April or early May, but they take only a languid interest in local affairs until late May or early June, or until such time as the water levels for that season are fairly established. The Forster Tern is one of those species which is peculiarly at the mercy of the elements. Normally, it constructs a well ordered cone (a shallow frustum, to be exact) of green herbage, water-weeds, and half-laced sedges, with contents lifted well above the moist earth; but frequent experience of disastrous flood has driven the birds to adopt various expedients. Chief among them is the seizure of other nests more fortunately conceived, as for example, those of the Western Grebe (*Æchmophorus occidentalis*). Although the grebe has a cruel beak, she seems unable, or unwilling, to use it in self-defense, and will not contest possession with the saucy tern, even though her own eggs be half incubated. The nest shown in the illustration on page 1446 happened to be a fresh one, upon which the tern had

[1] Notably at Hyperion in Los Angeles County. See Condor, Vol. XVI., p. 41.

made very hasty requisition; but I have seen others in which the eggs of the rightful owner were nearly buried under a little turret of dried reeds, upon which the tern had been allowed to lay her full complement.

In regions where muskrat houses are common, the terns use them as nesting sites; and where the accommodations are ample, or the colony crowded, share them to the number of two or three pairs to a turret. Occasionally the birds succeed in improvising floating nests of their own, where the water is quiet and offers support of submerged vegetation.

Taken in Merced County HOVERING *Photo by the Author*



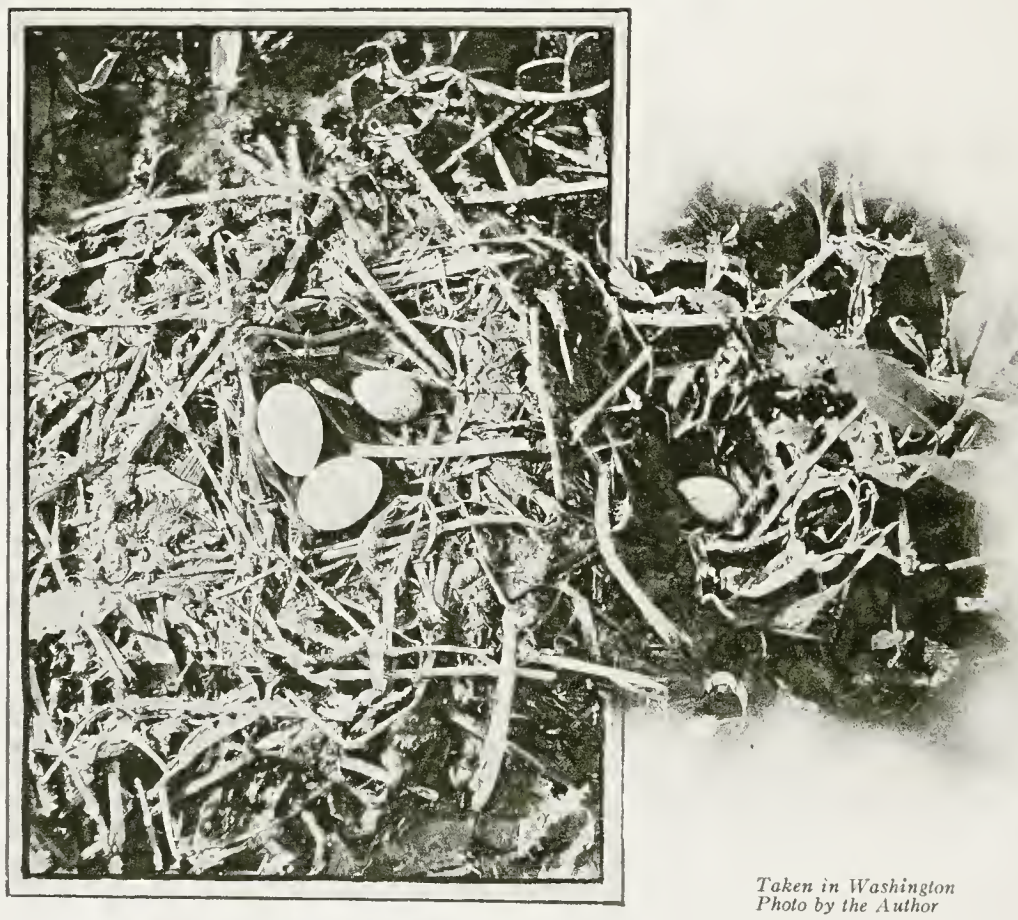
Taken in Merced County A NESTING HAUNT OF THE FORSTER TERN *Photo by the Author*

In the Los Baños country, whose wide watery stretches seem to possess an irresistible charm for these terns, the arbitrary handling of the flood gates brings disaster to many a colony, and a whole season's effort, renewed and persistent on the birds' part, may prove fruitless in the end.

For all that the terns are often interlopers themselves, the brooding bird resents intrusion, diving angrily at the human visitor and giving vent to the only cry which this bird utters, a harsh, low *ă-ă-ă* (like the *a* in bad), absurdly ineffective as a warning. All the neighbors join in the defense, and the intruder is berated in many inflections of very *platt Deutsch*. Every other point in the bird's make-up, the mild eye, the jaunty cap, the snowy plumage, the graceful lines of contour, the flowing streamers of the tail, so belie this vulgar vehemence that the observer is moved to jeer: "Aw, now, you ar'n't m*a-a*d!"

Eggs are normally three in number, spotted, after their kind, but I have fancied a tendency toward greens in the otherwise neutral ground-colors,—an incipient approximation of the normal surroundings. Nests containing five or six eggs are occasionally found, but these are undoubtedly the product of two birds. Marsh-dwellers are commonly tolerant of social breaches.

If the eggs are neither removed by flood nor addled by undue exposure to the sun, babies ensue, of such fashion as Mr. Rockwell recites:[1]



Taken in Washington
Photo by the Author

CONFLICTING CLAIMS

TWO EGGS OF THE WESTERN GREBE AND ONE OF THE FORSTER TERN OCCUPY THE NEST PROPER, WHILE A WAIF EGG OF THE AMERICAN COOT APPEARS AT THE RIGHT

[1] Robert B. Rockwell in "The Condor," Vol. XIII., Mar. 1911, p. 60.

"The young are beautiful little creatures, with a coat of silky down in soft grays and browns. While very young they somewhat resemble chicks, except for their long, sharp bills. They take to the water very readily, and their knack of self-concealment is wonderful. With nests on every side of us and a hundred screaming parents circling above our heads, an hour's hard search rewarded us with only four young, although there must have been at least a hundred young ones hiding in the area covered by our search. The young, as soon as they can 'navigate', are very animated, and show an unusual fear of an intruder. They are also quite pugnacious, babies no larger than a warbler pecking at an outstretched finger as viciously as a young hawk."

Taken in Merced County
Photo by the Author
AT THE END OF A SWOOP

Out of nesting hours the Forster Terns appear to divide their time about equally between fishing, hawking, and loafing. At fishing time the birds move about in leisurely fashion at a height of from ten to forty feet above the lake. The beak is carried point down like that of a mosquito, and the bird is evidently giving close attention to the water. Sometimes the bird hovers to make sure of the nature of its prey; but oftener, without an instant's hesitation, it plunges souse! into the water, sometimes passing clear from sight, and emerges a moment later with a wriggling minnow in its beak. When the insects are flying well, the Terns prefer to hawk. Dragon-flies and caddis-flies are favorite quarry, and in pursuit of the latter the birds will often rise to a height of several

hundred feet. But loafing is really Forsters' forte. They will stand around by the hour on fence-posts, in amiable listlessness, or they will foregather with their fellows in measureless content upon some low-lying mud-reef. Really, now, it rests the mind merely to recall these lazy Lazzaroni.

No. 287

Common Tern

A. O. U. No. 70. **Sterna hirundo** Linnæus.

Synonyms.—Wilson's Tern. Sea Swallow.

Description.—*Adult in summer:* Top of head and nape uniform deep black; back and wings pearl-gray; wing-quills dusky, more or less overlaid with silver, except on outer web of outer primary; the inner half of inner webs sharply white, but not reaching tip; rump, upper tail-coverts, and tail (basally and centrally) white; tail deeply forked, the outer pair of feathers elongated and narrowly tapering, but not, or barely, reaching the tips of closed wings; their outer webs abruptly grayish dusky, contrasting with white of inner webs; the succeeding pair also similarly marked; underparts white, strongly tinged, except on throat, crissum, and wing-linings, with pale pearl-gray or lavender-gray. Bill vermilion-red, blackening on tip; feet orange-vermilion. *Adult in winter:* Similar, but black cap imperfect, invaded by white on forehead and decreasingly on crown; underparts paler, or pure white. Bill and feet not so bright. *Young* (in August): Forehead and lores ashy gray; region about eyes, hind-crown, and nape leaden black; back, scapulars, and wings pearl-gray, each feather tipped with brownish buff and mingled subterminally with brownish dusky, forming a strong bar; upper tail-coverts and tail lighter pearl-gray, the central feathers of the latter tipped with buffy; the anterior lesser wing-coverts bluish dusky, with narrow ashy edgings; edge of wing and quills plumbeous-gray; underparts white. Length 330.2-406.4 (13.00-16.00); wing 273 (10.75); tail 127-152.4 (5.00-6.00); bill 35.7 (1.41), depth at angle 6.7 (.26); tarsus 20.3 (.80).

Recognition Marks.—Little Hawk or Crow size; black cap; pearl-gray mantle; deeply forked tail; extensive white, or pale grayish plumage; graceful flight. Known from the preceding species by outer pair of tail-feathers dark on the *outer* instead of the inner web; underparts not pure white in breeding season. Bill tipped with black as distinguished from next species.

Nesting.—Not known to breed in California. *Nests:* In colonies, on beach shingle, or in grass of low islands, lined or not, with bits of bark, grass, etc. *Eggs:* 2 or 3, rarely 4; very variable in ground-color—olive-buff, greenish or pinkish olive-buff to dark olive-buff, sharply spotted or small-blotched with black or brownish black with self-tones of bister and much undershell marking of violet-gray or pale violet-gray. Av. of 30 sets from Cobb's Island in the M. C. O. coll.: 41.9 x 30.8 (1.65 x 1.21); index 73. *Season:* June; one brood.

General Range.—Nearly cosmopolitan, but breeding only in temperate portions of Northern Hemisphere. In America breeds from Great Slave Lake, central Keewatin,

and Newfoundland south to North Carolina, western Pennsylvania, islands in Lake Erie, Manitoba, southern Saskatchewan, and Alberta. Not known to breed anywhere west of the Rocky Mountains. Migrates abundantly in the interior east of the Rockies and along the Atlantic seaboard; less commonly through Arizona and on the Pacific Coast from British Columbia southward to Venezuela and Brazil.

Occurrence in California.—Not common coastwise; sporadically (or briefly) abundant.

Authorities.—Heermann (*Sterna hirundo*), Rep. Pac. R. R. Surv., vol. x., 1859, p. 75 (Sacramento Valley); *Dwight*, Auk, vol. xviii., 1901, p. 54 (plumage and molt); *Beck*, Proc. Calif. Acad. Sci., ser. 4, vol. iii., 1910, p. 64 (off Monterey; migr.); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 16 (occurrence in s. Calif.).

WHAT a piece of work is a Tern! how gentle in instinct! how untrammeled in discursion! in form and moving how elegant and admirable! in action how like the swallow! in innocence how like the dove! the beauty of the air! the paragon of sea-birds!

Terns are the animating spirits of summer seas. Not bluff and sturdy like the Gulls, they have little place in winter's storm, but when the sun has re-established his dominion and only Zephyr pricks the caracoling waves, then the blue-gray daintiness of the Tern is as necessary to the scene as are the criss-cross mirrors of the amethystine sea. We hail with delight the appearance in the offing of a busy, happy company of the white-winged birds, weaving in the air by their incessant plyings a close-meshed fisher-net, wherein many a luckless minnow is entangled. Soon a lone straggler from out the company drifts shoreward, parting the air with graceful wing, now pausing critically over a suspected fish, like some pensive mosquito with his beak down-turned; now dropping with a splash beneath the wave, or making a nimble catch at the surface without wetting his plumage. Ever and anon the muffled undertone of the waves is pierced by a weird and half-petulant cry, *te-er te-erve*, childish, plaintive, yet somehow thrilling and exultant. And as the bird passes to rejoin his companions, you find he has borne away your fancy evermore to hover where blue skies laugh at blue waters, and innumerable wavelets trifle with innumerable sunbeams.

The occurrence of the Common Tern in California is still somewhat shrouded in mystery. The older authorities knew nothing at all about it. The first record appears to be that by Bishop,[1] of three specimens taken by H. W. Marsden at Pacific Beach, Sept. 8, 12 and 15, 1904. Yet Rollo H. Beck,[2] writing in 1910, finds it of common occurrence at Monterey, and records 109 California specimens in the collection of the Academy of Science. Willett[3] says it is probably a regular migrant

[1] Condor, Vol. VII., Sept. 1905, p. 141.
[2] Proc. Calif. Acad. Sci., 4th series, Vol. III., p. 64, Sept. 17, 1910.
[3] Pac. Coast Avifauna, No. 7, p. 16.

along our coast, in limited numbers, and in this my experience concurs. Our uncertainty is heightened by the fact that no nesting colony of the species has ever been reported from the Pacific Slope, not even from Alaska; and it would appear probable that birds nesting in the Canadian interior, as at Great Slave Lake, are finding their way to our coast in increasing numbers. There are spring as well as fall records for California, but no breeding nor winter records.

No. 288

Arctic Tern

A. O. U. No. 71. **Sterna paradisæa** Brünnich.

Synonyms.—Paradise Tern. Crimson-billed Tern. Portland Tern.

Description.—*Adult in breeding plumage:* Wings, tail, and black of head much as in preceding; mantle *deep* pearl-gray; lower rump and upper tail-coverts pure white; underparts deep pearl-gray tinged with lavender, clearing to white only on lining of wings, lower tail-coverts, and on sides of head adjacent to black cap. Bill bright carmine, sometimes faintly tipped with blackish; feet rich carmine. *Adult in winter plumage:* Similar, but underparts white; forehead, fore-crown, and lores, anteriorly, white; crown mixed black and white, and remaining black of cap a little broken. Bill *black* or with mere traces of red. *Immature:* Similar to adult in winter and much as in preceding species, but dusky crescentic subterminal markings of feathers on back, scapulars, etc., heavier and darker, their terminal skirtings ashy rather than buffy; the outer webs of two outer pairs of tail-feathers darker in tone, dusky rather than deep pearl-gray; the lores white as to ground, but sharply and finely streaked with dusky. Bill redder in tone basally. Length of adult: 355.6-431.8 (14.00-17.00); wing 254-273.1 (10.00-10.75); tail 165.1-215.9 (6.50-8.50); forked 101.6-127 (4.00-5.00); bill 30.5 (1.20); depth at angle 5.9 (.23); tarsus 15.6 (.61).

Recognition Marks.—Size of preceding; darker; tail more deeply forked, its outer feathers gracefully streaming; bill pure carmine in spring, red to black in fall migrations; smaller and slenderer than that of *S. hirundo.*

Nesting.—Does not breed in California. *Nest* and *Eggs* much as in *S. hirundo,* but coloration of eggs averaging darker, deep olive-buff. Av. size 40.6 x 27.9 (1.60 x 1.10).

General Range.—Coasts of both hemispheres during migrations, summering in the Northern Hemisphere, chiefly in the Arctic regions, but breeding, in North America, from Maine (formerly Massachusetts) and northern British Columbia northward; wintering chiefly in Antarctica, but also along both coasts of South America.

Occurrence in California.—Fairly common migrant coastwise or well off shore—observed only in the autumn.

Authorities.—**Lawrence** (*Sterna pikei*), Ann. Lyc. Nat. Hist. N. Y., vol. vi., 1853, p. 3 (Monterey); *Beck,* Proc. Calif. Acad. Sci., ser. 4, vol. iii., 1910, p. 64 (off Monterey; migr.); *Pierce,* Condor, vol. xxi., 1919, p. 125 (Laguna Beach); *C. W. Townsend,* in Bent, U. S. Nat. Mus., Bull. no. 113, 1921, p. 249 (life hist.; desc. and photos of nest and eggs, etc.).

THE ARCTIC Tern is truly named, for it enjoys a circumpolar distribution, and it breeds as far north as land is to be found, even to Grinnell and Peary Lands, in Latitude 82°. Because of favoring conditions, or perhaps because of ancient habit, established before the frigid zone was available as a nesting site, some few of the species still linger along the coast of Maine; and they have nested off the coast of Massachusetts within historic times. On the Pacific side, where milder temperatures prevail, the Arctic Tern does not breed further south than Glacier Bay and some of the Aleutian Islands. In migration, therefore, these birds are sure to occur regularly off our coasts, but our records are meager, and it is not certain that they may be expected with any regularity inshore. It is significant, however, that all records of coastal movement cease with Long Island on the Atlantic side, and with southern California on the Pacific.

The winter range of the Arctic Tern was for years shrouded in mystery. Finally, in 1904, these birds were discovered by the "Scotia" expedition to be present in immense numbers on the Weddell Sea, in Latitude 72° to 74° South. This particular waste of Antarctic waters is, therefore, in all probability, the focal point of the entire species; and in reaching this spot the birds must follow fly-lines across the open ocean, for there are few South American records of its occurrence. How romantic and how daring this annual flight from pole to pole (approximately speaking) really is, only the imagination may picture. At any rate, we know that *Sterna paradisæa* is the holder of the world's long distance record for migratory flight.

Of the further implications of this movement Mr. Wells W. Cooke[1] says: "The Arctic Terns arrive in the far north about June 15 and leave about August 25, thus staying 14 weeks at the nesting site. They probably spend a few weeks longer in the winter than in the summer home, and this would leave them scarcely 20 weeks for the round trip of 22,000 miles. Not less than 150 miles in a straight line must be their daily task, and this is undoubtedly multiplied several times by their zigzag twistings and turnings in pursuit of food.

"The Arctic Tern has more hours of daylight and sunlight than any other animal upon the globe. At the most northern nesting site the midnight sun has already appeared before the birds' arrival, and it never sets during their entire stay at the breeding grounds. During two months of their sojourn in the Antarctic the birds do not see a sunset; and for the rest of the time the sun dips only a little way below the horizon and broad daylight is continuous. The birds have, therefore, 24 hours of daylight for at least eight months in the year, and during the other four months have considerably more daylight than darkness."

[1] Bird Migration, Bull. No. 185, U. S. Dept. of Agriculture, 1915, pp. 9 and 10.

LEAST TERN

Brown's Least Tern, at Nest

From a photograph by the Author

Taken in Sandyland

No. 289

Brown's Least Tern

A. O. U. No. 74. **Sternula antillarum browni** (Mearns).

Description.—*Adult in summer:* A glossy black cap covering crown and nape broadly, pushed back from forehead by frontal crescent of pure white, whose base touches the bill and whose horns reach over the eyes, but do not cut off the black of lores from that of crown; remaining upperparts pearl-gray slightly silvered on wing-quills, except three outer primaries which are chiefly blackish, with abrupt white on the inner half of the inner web; underparts grayish white. Bill yellow, usually tipped with black; feet yellow with black nails. *Adult in winter:* Lores white; area of cap restricted to sides of head and to nape; crown with black shaft lines; upperparts darker gray with reduction of silver in wing-quills, and encroachment of white on cervix. Bill blackish; feet duller yellow. *Immature:* Like adult in winter, but black and white of head not so clearly defined, and pearl-gray of upperparts varied by lighter tips; traces of dusky on tail. *Young in August:* Lores, forehead, and crown brownish buffy; a dusky border through eye and around on nape; feathers of back and wing-coverts dusky in lunate or horse-shoe-shaped or catenate markings, varied by buffy centrally or on edges; primary coverts dusky with buffy edgings, and quills silvery dusky; tail slightly emarginate, mottled buffy and dusky centrally with white edgings. Bill brownish black, paling basally. Length of adult about 228.6 (9.00); wing 167.8 (6.61); tail 88.9 (3.50); its fork 44.5 (1.75); bill 27 (1.06); depth at angle 5.4 (.21); tarsus 15.4 (.61).

Recognition Marks.—Sparrow size as to body; of course appearing much larger, but easily distinguishable as the smallest of the terns; black cap; yellow bill; forked tail.

Nesting.—*Nests* in colonies—mere hollows in sand or beach shingle. *Eggs:* 2 or 3; pale olive-buff, spotted rather finely and sparingly with dark chocolate and violet-gray. Av. size 30.5 x 22.35 (1.20 x .88); index 73.3. *Season:* June–July (May 20–Aug. 12); one brood.

Range of *Sternula antillarum.*—Both coasts of the United States and the Mississippi Valley south, at least, to Venezuela.

Range of *S. a. browni.*—Pacific Coast of the Americas. Breeds north to Monterey Bay, California, and winters south at least to Guatemala and probably Peru.

Distribution in California.—Breeds in colonies on sand beaches north to Monterey Bay. There are eight or ten regular breeding stations, and varying conditions of back-water invite occasional nestings. Arrives April–June; leaves in Sept. Latest record of occurrence, Nov. 14, 1914, Santa Barbara.

Authorities.—**Coues** (*Sterna antillarum*), Proc. Acad. Nat. Sci. Phila., 1866, p. 100 (coast of Calif.); *McCormick*, Bull. Cooper Orn. Club, vol. 1, 1899, p. 49 (Los Angeles Co., breeding habits); *McAtee*, U. S. Dept. Agric., Farmers' Bull. 497, 1912, p. 24 (food); *Mearns*, Proc. Biol. Soc. Wash., vol. xxix., 1916, p. 71 (*Sterna antillarum browni*, new subsp.; Pacific Ocean, San Diego Co., near Mexican boundary).

THE DOVE is often held up to us as the symbol of architectural indifference or of slovenly home-making, but the palm really belongs to the Least Tern. House-building for the Tern has no other meaning or

Taken at Sandyland *Photo by the Author*

STANDING HER GROUND

instrument than a pressure of the breast upon the sand. Home has no slightest connotation for her beyond that of locality, the place, perforce, where earth and sky must meet. For herself she would fainest linger ever in the air, descending only momentarily to seize her sustenance from the billow. But Nature in her wisdom has not seen fit to perfect a method by which such airy fairy creatures may perpetuate their kind, save by vulgar contact with the earth. And if it were not so, we should learn no more about them than we know of wandering comets. These Least Terns shall form no exception to the living

Taken in Monterey County *Photo by the Author*

LESS THAN THE LEAST

IN OTHER WORDS, LITTLE LEAST TERNS

line and they shall have no respite from the common lot. They must cease their tropical flutterings, their happy wanderings up and down the airy aisles which parallel a thousandfold the illimitable shores. Come, birdies, sea sprites, fog-fays, wisps of sunlit spray,—howsoe'er ye call yourselves—get you to your knitting! Reproduce your sylphian, frivolous kind! Where? Oh, any stretch of sun-warmed sand will do, fronting the ocean. Oh, of course, the ocean. But better one where humans will not come, nor dogs—those boisterous marplots! Better, too, if you have a stretch of quiet waters to the rear, a lagoon or river or imprisoned pool, where fish will never fail you for the babies.

Taken in Monterey County *Photo by the Author*

A TERN A-WING

Truth to tell, the shores of California no longer offer safe asylum to these tender children of the tropics. They still nest with us, or try to, but the odds are against them. The playground of humanity, as we boast our southern shores to be, is no fit place for birds like these. The beaches belong to us. The sand is ours. We require it for the erection of cottages, casinos, bath-houses, and other important things—and to exercise our dogs, withal. The mermaids are gone, the Tritons are fled. Better that these birds go after them.

Taken in Monterey County *Photo by the Author*

TERN COUNTRY

In the early stage of egg-laying the birds are very easily disturbed, rising in a cloud at the distant approach of danger, and scattering in a fairy maelstrom of protest. As incubation advances only the nearer pairs attend upon the danger, so that the intruder moves about under a shifting halo of ex-

cited birds. The pair most nearly threatened does not hesitate to dive and shriek, after the fashion of the falcon, while all about us is a bewildering chorus of expletives. *Uik, uik, uik,* squeals the exasperated bird in accents which would do credit to a baby porker caught in the fence. *Uik, uik,* grunts a sympathetic neighbor, in spite of a slender minnow dangling from her beak; while the less disturbed express themselves in a more musical tone, *kit'oo, kit'oo* or *jik, jik, kit'oo.*

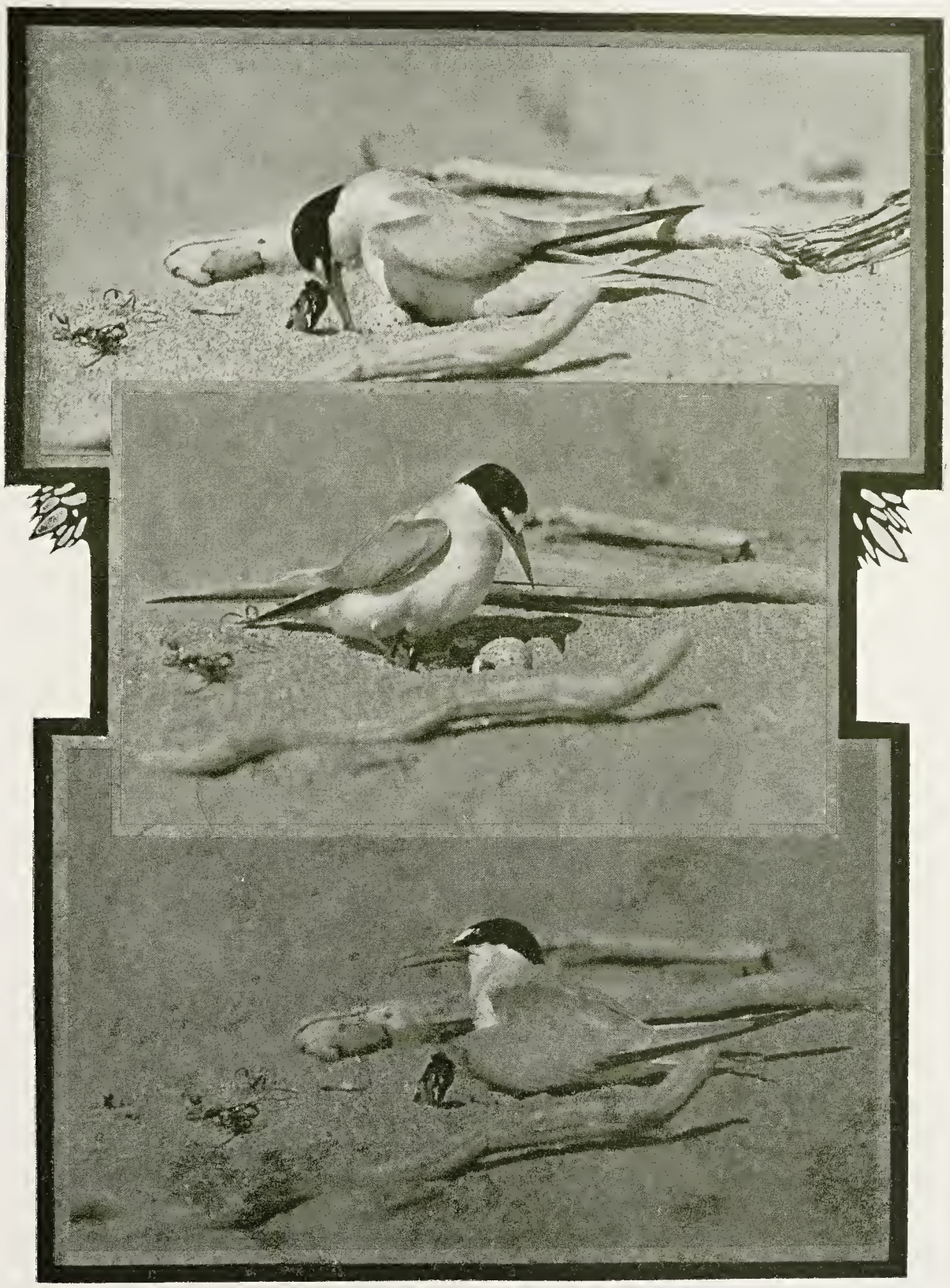
As often as we are quiet, the gentle Terns begin to settle. But as they do so, they oftenest remain for a moment or so with wings daintily uplifted. This may be partly for readiness to instant flight, or partly as a decoy signal, for they sometimes make a little run with the wings up, and then look about over the shoulder to see if we are following. There is no law or order whatever about a choice of nesting places. One may be marked by a stick or a clam-shell hard by; another will be on the bare sand a rod from any other object. Now and then a bit of scattered drift may attract attention, and occasionally a brooding Snowy Plover, already established, will act as a sort of land-mark for the homesteading tern. Once I found two eggs of the tern quartered with three of the plover. The tern I knew to be the offender; and I think she acted from no more sinister motive than that of using a recommended site.

Taken near Santa Barbara *Photo by the Author*

FACE TO FACE

TAKEN FROM BLIND AT RANGE OF 2½ FEET

Because of incessant disturbance to which the birds are subjected, incubation will



Taken at Sandyland *Photo by the Author*

THREE TURNS WITH THE GRAFLEX

1457

(Left) Taken in Monterey County
(Right) Taken in Orange County

Photo by the Author
Photo by Wright M. Pierce

AN OÖLOGICAL DREAM

be at any stage. Fresh eggs in twos, or rarely in threes, vie in interest with toddling chicks, who freeze upon the instant of approach. If it is a windy beach, like that of Monterey, the baby's eyes are filled with sand, for he executes his part unblinking. Too much sun will not do, either; and the infant, denied his mother's wing, must either find shelter under a leaf or a bit of drift on the higher beach, or perish.

Under ideal conditions the Least Tern may possibly raise two broods in a season. Ordinarily the range assigned for fresh eggs, May 20th to August 1st, must rather represent successive attempts, thwarted at first by wind or tide or depredation.

The early history of the Least Tern in California appears to be lost in obscurity. Whether or not it was really abundant in the earlier days, we do not know. It suffered, of course, near extinction in the days of the plume-hunters. Since those days there has been a notable recovery, and it may be that through comparative protection from gun-fire, and especially from the definite protection extended to it by the Bolsa Chica Gun Club on their properties, the species will really increase on the whole, in spite of disturbed beach conditions elsewhere. Mr. W. Lee Chambers, writing from Santa Monica in 1908,[1] reported the birds as decreasing sharply at Ballona Beach and at Redondo Beach, but increasing at Bolsa and Newport beaches. Colonies have been reported from the following localities: Moss Landing (Monterey Bay), Carpinteria (intermittent), Hueneme, Playa Del Rey, Redondo, Sunset Beach, Newport Beach, and Pacific Beach (San Diego County).

Taken at Sandyland *Photo by the Author*

THE SPLASH

THE BIRD IS, OF COURSE, EMERGING FROM A PLUNGE

[1] Condor, Vol. X., p. 237.

No. 290

Black Tern

A. O. U. No. 77. **Chlidonias nigra surinamensis** (Gmelin).

Description.—*Adult in summer:* Head and neck all around, glossy black, shading into sooty black of underparts; the crissum white and the edges and lining of wings white or pale pearl-gray; upperparts plumbeous, darker on upper back, where it blends through slate with black cervix; bend of wing white; primaries inclined to silvery on exposed webs after the first, the inner webs, however, dusky, lightening on the inner half, and the shafts white; tail slightly forked. Bill and feet black. *Adult in winter:* Lighter, the black replaced by white, save on back of head, orbits, and auriculars, where obscurely persistent; upperparts deep pearl-gray. *Immature:* Like adult in winter, but upperparts more or less tinged and tipped with brownish, and sides washed with grayish. Length 228.6-260.4 (9.00-10.25); wing 203.2-215.9 (8.00-8.50); tail 76.2 (3.00); bill 26.4 (1.04); tarsus 17 (.67).

Recognition Marks.—Towhee to Robin size, but appearing about Killdeer size; sooty black and plumbeous coloration distinctive in breeding plumage; *dark* pearl-gray of upperparts with *black* bill (and feet), with small size sufficiently distinctive at other seasons.

Nesting.—*Nests* in loose colony fashion, each a truncated cone of twisted grasses or bent sedged, placed on ground in marshes or on drifting reeds, old grebe nests, or anything which offers support on the surface of the water. *Eggs:* 3 (4 of record); olive-buff to dark olive-buff, or cinnamon-buff to clay-color and tawny olive, heavily spotted and wreathed, or strikingly blotched, or even rough-banded, with black or reddish black (dark bister to dark vandyke brown). Av. of 15 sets in M. C. O. coll.: 33.5 x 23.9 (1.32 x .94); index 71. *Season:* c. June 1st; one brood.

Range of *Chlidonias nigra.*—Europe and temperate North America, south in winter to Africa (both coasts) and South America.

Range of *C. n. surinamensis.*—Breeds in interior North America from southwestern British Columbia, Mackenzie (Great Slave Lake), and *southern* Keewatin, southeastward to eastern end of Lake Ontario, thence southwestward through northern Ohio, Kansas, etc., to southern California. Of general occurrence near water during migrations, but especially coastwise, south through Mexico and Central America to the Guianas, Peru and Chile.

Distribution in California.—Breeds commonly at suitable places in the interior, both east and west of the Sierras, and as far south as Buena Vista Lake (Linton) and possibly Lake Elsinore (Heller). Of rare occurrence coastwise above Point Conception, but abundant during migrations in the Santa Barbara sector.

Authorities.—**Cooper** (*Hydrochelida plumbea*), Proc. Calif. Acad. Sci., vol. ii., 1861, p. 122 (headwaters of Mojave River); *McAtee*, U. S. Dept. Agric., Farmers' Bull. 497, 1912, p. 24 (food); *Tyler*, Pac. Coast Avifauna, no. 9, 1913, p. 14 (San Joaquin Valley; breeding habits).

IRRIGATION has caused the desert of the West to blossom as the rose. If that were all, we could be thankful for roses—and *such* roses! California roses, of course! But when to roses are added such practical

blessings as alfalfa and barley and potatoes, not to mention strawberries and oranges and avocadoes, we are never done praising the beneficence of nature, assisted by the measured art of the engineer. But irrigation may be lavish as well as stinted, and it is for the by-products of flooded fields and rejuvenated morasses that the ornithologist finds himself most thankful. And nature herself has been the great engineer in California. Kern, Buena Vista, Tulare, Tahoe, Goose, Eagle, Honey, Tule, and Klamath, these are the names not of "projects," but of natural catch-basins whose annual levels are determined by the largess of the snows, and whose overflowing borders, therefore, offer a boundless hospitality to the birds.

The Black Tern is the familiar spirit of all fresh-water swamps in California north of the Tehachipe. Wherever water spreads itself not too deeply to encourage vegetable growth, whether of sedge or typha or tule, this restless, petulant, graceful water-sprite harries the face of nature, pursues insects, chides intruders, builds adventurous rafts for the use of his offspring, and otherwise conducts his Chlidonian business.

Taken in Merced County *Photo by the Author*

BREEDING HAUNT OF THE BLACK TERN

Taken near Los Banos *Photo by the Author*

A CONSCIENTIOUS OBJECTOR

During the migrations the birds may show themselves on southern ponds, at Nigger Slough or Elsinore, or even at the beaches; but little time is spent en route, and the birds are anxious to get to the home grounds where they may at least *talk* business. If the water-levels are right, they will pitch into May's serious task as early as the 10th instant; but if, as is more likely, it is still too chilly or too dry, they will harry the Grebes, or the muskrats, or vent their displeasure on a prowling coyote. Nesting is at its height by the second week in June, but high water or destructive winds foil many early efforts and not half the babies of the season are brought off before July. Late July and early August are spent in leisurely fashion, either in loitering about the accustomed swamps or in the exploration of out-of-the-way lakes not suitable for breeding purposes. The return movement sets in by the middle of August, at which time the higher altitudes are cleared; but migrants are passing at the coast till mid-September.

The food of the Black Tern consists very largely of insects. These are obtained a-wing, and in securing them the bird exhibits great dexterity,—now towering to a lofty height, with a single stroke against the wind, to make connections with a drifting moth; now following a bewildering zigzag through the reed-tops in pursuit of the agile dragon-fly. In the fall I have seen them busily engaged over beds of pond-weed. On these occasions they feed with a peculiar dabbing motion, by which they cull some tidbit from the surface of the weed-strewn water, and regain a higher level after each stroke without wetting the wings. Undoubtedly, also, they glean the larvæ of various water-insects from the stalks of ascending vegetation; and they use to a lesser degree the plunge-and-strike methods of the other terns.

In searching for the nests of the Black Tern, one must penetrate the

oozy recesses of an undisturbed swamp, preferably in a flat-boat. Here in some secluded stretch the birds will hover about the intruder, fretting and screaming incessantly. If the water becomes too thick with mud and tangled vegetation to admit of easy passage, one must be content to strip off and wade through black water, say six inches deep, over black mud one and a half feet deep, and be prepared as well for occasional plunges into uncharted depths. When one gets "hot" in this ancient game of hide-the-thimble, the most interested pair of

Taken near Los Banos
Photo by the Author

BLACK TERNS A-WING

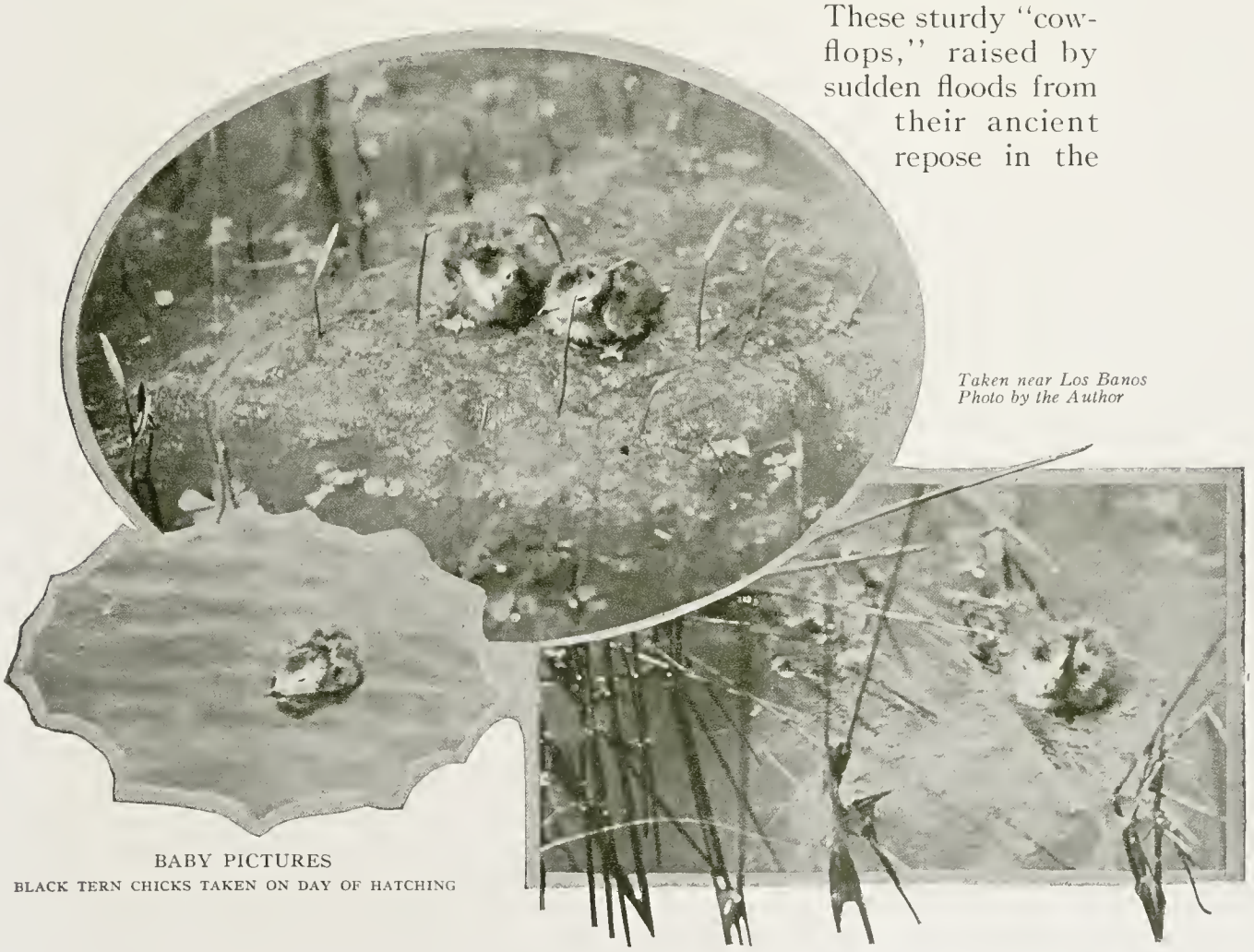
birds will single themselves out from the hovering throng and prepare for defense. Unless their advances are early discouraged, the boldness of these two will increase until they actually strike the intruder on the head, to say nothing of frequent salutations with flying shearn. At the same time the characteristic cry, *krik, krik*—lighter in character than that of the Forster Tern, but still guttural and harsh—is flatted by anger into *kra-ack, kra-ack.*

Taken in Washington *Photo by the Author*

A FLOATING NEST OF THE BLACK TERN

The nests are placed variously in the swamp, sometimes on a little raft of floating vegetation which the bird has brought together, sometimes on a truncated cone of fresh-cut herbage and twisted grasses resting upon the solid earth, but oftenest upon the ample expanse of some grebe's nest, new or old. The little tyrants have no hesitation in appropriating a grebe's nest of fresh construction, even though the rightful owner has already deposited eggs. The spitfires have the advantage in being able to strike from above, and it is to be feared they sometimes resort to mob tactics in case of serious opposition. The pale olive-brown eggs, heavily spotted and blotched with blackish brown, harmonize so perfectly with their surroundings of decaying and mud-spattered vegetation as almost to elude the sight, even after being once discovered.

As a special instance of nesting in the cattle country, one cannot forbear to mention the frequency with which these birds are beguiled by the attraction of floating cakes of cow-dung for use as nesting sites. These sturdy "cow-flops," raised by sudden floods from their ancient repose in the



Taken near Los Banos
Photo by the Author

BABY PICTURES
BLACK TERN CHICKS TAKEN ON DAY OF HATCHING

erstwhile pasture, offer all the requisites of stability, lightness, and convenient size which the birds admire—for a season. But the disintegrating power of the circumambient water is invariably more rapid in action than are the processes of incubation, and the end of that lowly cradle is inevitably tragic. But the birds will not learn, and the houses erected upon these deceitful foundations are as numerous as ever the following year.

Taken in Washington *Photo by the Author*

NEST AND EGGS OF BLACK TERN

THE EGGS ARE PLACED IN A USURPED NEST OF THE WESTERN GREBE'S

Better taste was shown by a pair of these Terns which found a floating board-end, and proceeded to anchor it forthwith by sedge-stems broken down from either side. This with a turret of plaited stems made a bully house-boat, a cradle fitter than that of Moses.

The chicks whose portraits appear on Page 1465 were brothers (?) picked up in a Los Baños swamp. They were industriously clambering over the moss when found, but they soon endeared themselves to our photographic heart by exhibiting a willingness to "stay put." One, when placed upon the water, swam off vigorously until it encountered a small island of scum, whereupon it scrambled aboard and proceeded to settle

down for a snooze. The other baby "froze" promptly upon the surface of the water, where it rode as lightly as a cork, and allowed the breeze to blow it about as it listed.

An interesting thing about the downy plumage is its light color, harking back, as it does, to the ancestral type of a lighter bird. The general color of the chick is a dull golden fulvous, variegated by black; but the face, including a considerable circumocular area, is pure white. The feet and tarsi are pale dusky and the nails are black, while the bill is of a dull pinkish shade with a black tip. Needless to say the parent birds are very much interested in these phylogenetic notations, and they invite us to desist in language whose vigor admonishes against translation.

Taken near Santa Barbara *Photo by the Author*

BLACK TERN IN AUTUMNAL PLUMAGE

No. 291

Cassin's Auklet

A. O. U. No. 16. **Ptychoramphus aleuticus** (Pallas).

Synonyms.—Aleutian Auklet. Cassin's Auk.

Description.—*Adult in breeding season:* Above sooty plumbeous-black, changing to sooty plumbeous-gray on throat, breast, and sides, bluish tinge clearest on rump and scapulars, wings and tail brownish dusky, paling on edges and exposed portions; lining of wing partly white; a white spot over eye a little forward, and a touch on lower

lid posteriorly; remaining underparts pure white. Bill (drying) black, changing to yellow on base of lower mandible; iris greenish blue; feet chiefly black, nails black. *The fall moult* renews and strengthens the plumbeous tone throughout, but the throat is paler, sometimes definitely white. *Immature:* Similar to adult in autumn but wings blacker. Feet and tarsi yellow before, black behind. *Downy young:* Chiefly brownish dusky; white pattern of adult indicated by lighter gray on underparts; sides of head and throat chiefly naked, orange-yellow. Bill and feet as in immature. Length of adult: 203.2-241.3 (8.00-9.50); wing 121.9 (4.80); bill 19.1 (.75); depth at base 9.9 (.39); tarsus 25.4 (1.00).

Recognition Marks.—Robin size; chunky appearance; stout bill; blackish and white plumage; absence of appendages or special adornments in itself nearly distinctive, save as regards the slenderer and smaller-billed Marbled Murrelet.

Nesting.—Single *egg*, white or pale greenish white, unmarked; placed at end of burrow three or four feet in length, or in crevice of rock. Av. size 47 x 34 (1.85 x 1.34). *Season:* April–June; one brood.

General Range.—Pacific Coast and islands of North America from the Aleutian Islands to the coast of northern Lower California, breeding throughout its range, or perhaps retiring slightly in winter (at least to Cerros and Natividad Islands).

Distribution in California.—Common resident on the ocean, and breeding in suitable localities, chiefly the Farallons and the smaller islets along the entire coast.

Authorities.—Gambel (*Mergulus cassinii*), Proc. Acad. Nat. Sci. Phila., vol. ii., 1845, p. 266 (coast of Calif.); *Stejneger*, U. S. Nat. Mus., Bull. no. 29, 1885, p. 27, footnote (molt of bill); *Dawson*, Condor, vol. xiii., 1911, p. 173 (Farallon Ids.; habits, etc.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 20 (s. Calif. ids.); *Bent*, U. S. Nat. Mus., Bull. no. 107, 1919, p. 110 (life hist.; desc. and photos of nests, etc.).

THE PETREL population of the islands lying off the coast of California is not large; and Howell is probably correct in his surmise[1] that this species outnumbers all our other small pelagic birds combined. The case was quite otherwise on the coast of Washington, where in 1907 we had just discovered the presence of Cassin Auklets on a rocky islet which was tenanted by some 40,000 Beal Petrels.

Determined to get a line on the night-life of this interesting colony, we returned to the mainland for blankets and other supplies and had the Indians land us by canoe at nightfall. The distant lights of the Indian village and the myriad stars entertain us, but the real performance does not begin till well on toward ten o'clock. Now for the orchestra. "*Petteretteretterell, etteretteretterell*"— it is the tap, tap of the Petrel conductor calling the island to attention. Soon ghostly forms steal about in the gathering gloom. Voice answers voice as each moment flies. The flitting shadows become a throng, and the chorus a tumult. But in the grand melange there is a new note. A quaint, burring croak wells up from the ground, elfish, gruesome, portentous. The Cassin Auklets are waking up. Heard alone, the Auklet chorus reminds one of a frog-pond in full

[1] A. B. Howell, Pac. Coast Avifauna, No. 12, (1917), p. 21.

cry. As one gives attention to an individual performer, however, and seeks to locate him in his burrow, the mystery and strangeness of it grows. The vocalist is complaining bitterly of we know not what wrongs. We must be within three feet of the noise as we stoop at the burrow's mouth; the volume of it is ear-filling; yet its source seems furlongs off. Now it is like the squealing of a pig in a distant slaughter pen. We lift our heads

Taken in Washington *Photo by the Author*

CASSIN AUKLET, ADULT AND YOUNG

and the stock yards are reeling with the prayers and cries of a thousand victims. And now the complaint falls into a cadence, "*Let meee out, let meee out, let me out.*" A thousand dolorous voices take up the chorus. The uproar gets upon the nerves. Is this a bird lunatic asylum? Have we stumbled upon an avian mad-house here in the lone Pacific? And are these inmates appealing to the moon, their absent mistress?

Nay, rather, it is the eternal infant. It is the voice of elemental hunger we hear, and we are powerless to answer. Oh, the unwearying importunity of the hungry child! Earth nor heaven shall forget him while

Photo by the Author

THE LANDING PLACE: SOUTHEAST FARALLON ISLAND

he draws the breath of want. Listen, ocean! and hearken, ye still spaces! "*Let me eat, let me eat, let me eat!*" Anxious fathers and distraught mothers hurry to and fro under the lash of the myriad hunger cry. There are some sounds of satisfaction here and there, but they are drowned in the universal shout. Hour after hour goes by and still the fury of demand increases. Fast and faster whirls the ministering host. High and higher rolls the tumult—until tired nature (human nature) asserts herself and we drop off to sleep—to awaken only when the sun is an hour high and the silence of the island is unbroken save by a few quavering gulls.

The midnight pace is still more furious on the Farallon Islands. An expert might know, indeed, from certain signs at midday—a foot-worn burrow-mouth, or a whitewashed rock-slide—that Cassin Auklets were about, but the day-life of the island is untroubled by the thought of what lies underneath entombed in silence. But sally forth at midnight, armed only with a lantern, and you shall see what a teeming Nineveh is there. Go where he will, one hears a roar of wings and sees a multitude of twinkling forms; and, moreover, one is kept very busy avoiding the onslaught of the reckless birds, who, if not moved to fly toward the light, are stirred by its presence to lawless activity which may result in any sort of collision. It is no uncommon experience to be struck in the face by one of these hapless fowls, and that with a force which leaves bruises and scars.

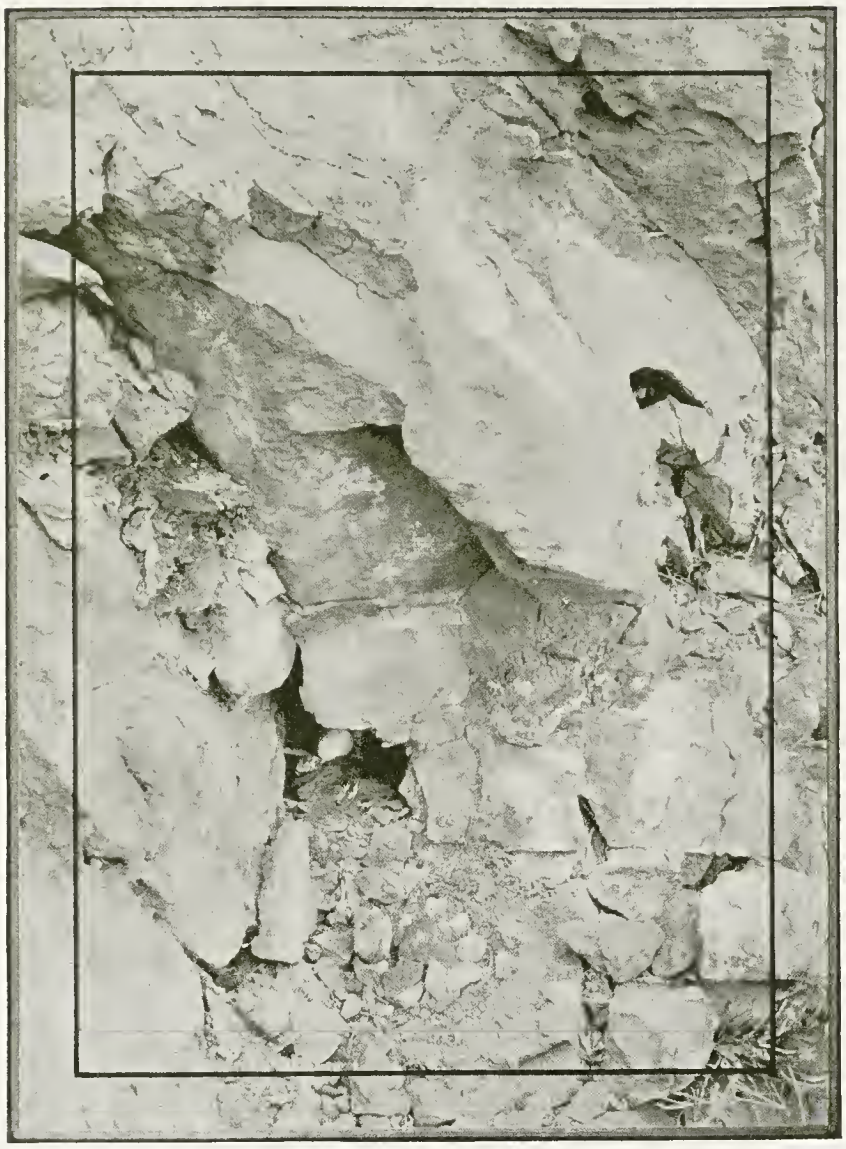
The Cassin Auklet seems incapable of controlling the force of its flight, and the wonder is that they are not every one of them dashed in

pieces in a single night in their effort to locate their proper burrows. In this respect they remind one of nothing else so much as beetles or moths which come hurtling into the region of candle light, and without an instant's pause for presumed necessary recovery, begin an animated search for an imaginary exit. This crash-and-crawl method seemed not exceptional but characteristic. It was especially noticeable in the paved area just outside our workroom doors. (We occupied an outbuilding of the light-keepers' quarters.) Crash! announced the arrival of another food-laden wanderer from the unknown. The impact against the building invariably stunned the bird so that it fell to the ground, but immediately it began a frantic search, and as likely as not, before we could lay hands on it, it disappeared under a crack in the doorstep. "*Right here,*" from a certain spot under the floor announced the home-coming, and so enthusiastic would be the reception accorded the tipsy reveler that for a time all human conversation above had to be suspended.

The Cassin Auklets are *everywhere* on the Southeast Farallon. Burrows, of course, predominate, but there is not a cranny, nook, cleft, crack,

Taken on the Southeast Farallon *Photo by the Author*

AN ANCIENT NESTING GROUND



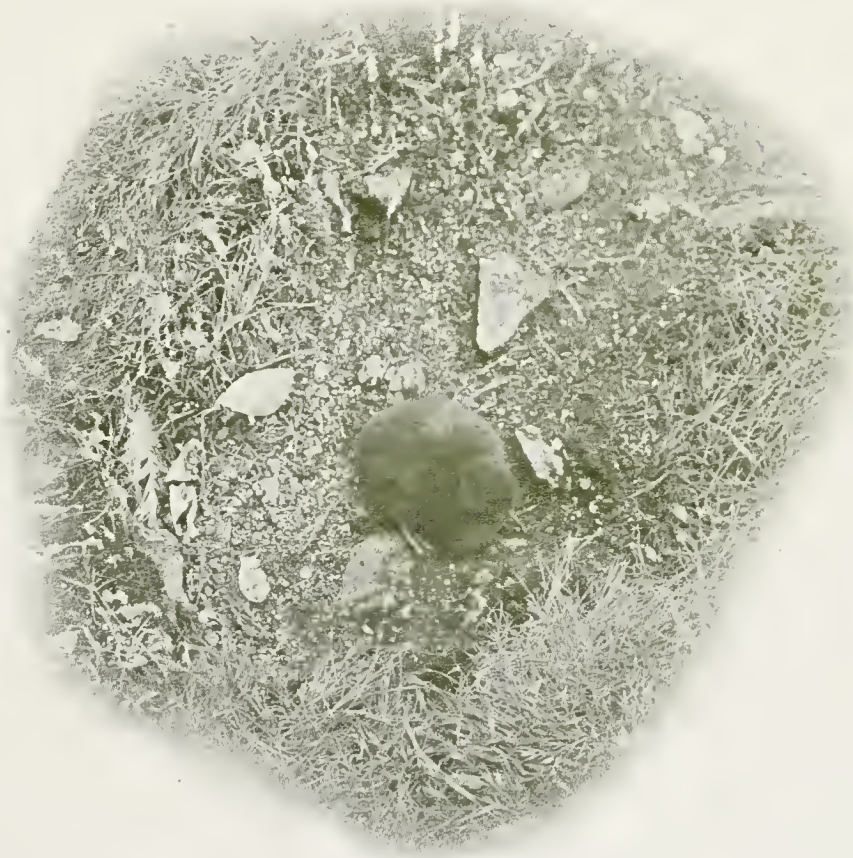
Taken on Los Coronados Islands, L. C. *Photo by Donald R. Dickey*
EGG OF CASSIN AUKLET, IN SITU

aperture, retreat, niche, cave, receptacle, or hideyhole, from the water's edge to the summit of the lighttower which is not likely to harbor this ubiquitous bird. The interstices of all stone walls harbor them by the score. Every cavity not definitely occupied by puffin, petrel, or rabbit, is tenanted by an auklet, and in some cases quarters are shared. If one's imagination is not sufficiently stimulated by regular occurrences, it will be jogged by appearances in unexpected places,—an old nest of Rock Wren or Pigeon Guillemot, an inner recess of a murre cave, an abandoned spur of a puffin burrow, an overturned wheelbarrow, or a neglected board lying on the ground, driftwood on the beach—anything affording the slightest prospect of protection or cover. A pile of coal, sacked up and awaiting transfer from landing to siren, was found to be full of them. Since this was the rule, from center to circumference of this magic isle, we concluded that the Cassin Auklet is the commonest bird in the Farallons; and estimates of population anywhere short of one or two hundred thousand do not take account of the facts.

Cassin Auklets are rather early nesters. They begin to haul out in February on Los Coronados, and fresh eggs, according to Howell, may be looked for at that station by the end of March. On the Farallons May 1st would be a better date; and on the islands off the Del Norte coast June 1st will suffice for at least a third of their number.

Sanitation in the Auklet burrows is a thing unknown, and the youngsters are stuffed with a semi-liquid food which smells like an abandoned fish-market. An abundance of slaty down insures the chick against rheumatism; and his quarters must seem comfortable enough to him, for he sits tight until he is full grown; and the only mark of adolescence left when he quits the burrow is a little tipping of gray down. When haled forth and released by the hand, the Auklet invariably dives downward, skimming low, first over the ground or the rocks and then over the water, and seeming to dread exposure. The reason for this is explained by Howell, who says that the Cassin Auklets suffer a great deal from the depredations of Duck Hawks. Indeed, it is the fashion of this master pirate to quarter himself near some thriving colony of Auklets, and to kill for sport even after his hunger has been appeased.

Save for the revelations of the nesting season, the Cassin Auklet is one of the least observed of birds. It takes care not to be seen by daylight in the vicinity of a nesting colony, and it feeds habitually, whether in pairs or small companies, well out to sea. The winter storms play sad havoc with these birds, and it is only from examining the wreckage cast up on shore that one may guess how large the proportion of Auklets really is in our winter bird population.



Taken on the Farallon Islands *Photo by the Author*

CASSIN AUKLET, PULLUS, IN SITU

A BOARD UNDER WHICH THE MOTHER BIRD HAD HIDDEN HER NEST HAS BEEN REMOVED

No. 292

Paroquet Auklet

A. O. U. No. 17. **Phaleris psittacula** (Pallas).

Synonyms.—Pug-nosed Auklet. Parrot Auk.

Description.—*Adult in breeding plumage:* Upperparts uniform slaty black, changing to sooty black on chin, throat, fore-neck, and sides, thence to white on remaining underparts; lining of wings fuscous; a line of narrow pointed white feathers starting from eye and continued obliquely backward and downward; a touch of white on upper eyelid. Bill with strongly convex culmen and more strongly recurved gonys (tomia correspondingly upcurved), vermilion-red, changing to horn-yellow at tip and along tomia. Size of bill slightly increased by a series of flattened pieces which are deciduous in winter. *Winter adults* are white on chin and throat as well, with the sides of the latter dusky-spotted. "*Young:* No white filaments on head; a white spot on lower eyelid; upper parts as before [in adult]; under parts white, marbled and mottled with dusky ends of feathers" (Coues). Length of adult 228.6 (9.00) or more; wing 137.2-146.1 (5.40-5.75); tail 39.4 (1.55); bill (chord of culmen) 15.2 (.60); depth of bill at base 13.6 (.54); tarsus 25.4 (1.00).

Recognition Marks.—Robin size; "pug-nosed" bill; white line of plumes from behind eye in adult.

Nesting.—Does not breed in California. Single white *egg*, roughened and soiled, placed deep in fissure or cranny of volcanic rock. Av. size 54.4 x 37.3 (2.14 x 1.47). *Season:* June–August.

General Range.—"Coasts and islands of Bering Sea and contiguous portions of northern Pacific Ocean; breeding from northeastern coast of Siberia and northwestern Alaska (including Diomede, St. Lawrence, Hall, St. Matthew, Pribilof, Walrus and Otter islands, Bering Sea) southward to Kuril, Commander, Aleutian, and Shumagin islands; southward in winter as far as Monterey Bay, California, northern Japan and Okotsh Sea; accidental in Sweden."

Occurrence in California.—Rare winter visitor along the coast, at least as far south as Point Pinos (near Monterey).

Authorities.—**Loomis** (*Cyclorrhynchus psittaculus*), Auk, vol. xviii., 1901, p. 104 (San Francisco Bay); *Beck*, Proc. Calif. Acad. Sci., ser. 4, iii., 1910, p. 59 (near Monterey, Jan.); *Clay*, Condor, vol. xiv., 1912, p. 196 (Eureka); *Bent*, U. S. Nat. Mus., Bull. no. 109, 1919, p. 116 (life hist.; desc. and photos of nest and eggs, etc.).

THE INVESTIGATIONS of Messrs. Leverett M. Loomis and Rollo H. Beck on Monterey Bay and the adjacent ocean have convinced us that there is an abundant off-shore bird life of which most land lubbers are utterly ignorant. In the month of January, 1905, and again in 1908, Mr. Beck captured seventeen specimens of the Paroquet Auklet, and picked up another, a dead one, on the beach. Evidently these are fishers of the open sea, who visit the land only by accident in time of dense fog or storm.

As nearly as can be determined, the peculiar retroussé effect of this

bird's bill is merely ornamental, since its food comprises chiefly the tiny crustaceans taken in open water. Moreover, certain parts about the base of the bill are deciduous at the end of the breeding season. While our esthetic sense may not exactly approve of the mandibular extravagances which birds of this group indulge at the approach of spring, we should remember the grotesque ear-rings and lip ornaments which have pleased the fancy of our own species at times, and we will not be in haste to criticize the bizarre tastes of these little savages of the sea. Nature may be amusing if she likes. Why not?

Birds of this and allied species exist in Bering Sea by countless millions, and they form a not unimportant element of Eskimo fare. Hungry whalers also sample them on occasion, but their flesh is not seductive to the Caucasian palate. The Paroquets nest in the abundant crevices of the rough volcanic islands, placing their single white egg upon the bare rock or soil. The males spend most of the day at sea, fishing, but return late in the afternoon to feed their mates. After this and until four or five o'clock in the morning they may be seen dozing at the entrances of their nests. "They have a low, sonorous, vibrating whistle and do not fly in flocks like most other Auks."

No. 293

Pigeon Guillemot

A. O. U. No. 29. **Cepphus columba** Pallas.

Synonym.—Sea Pigeon.

Description.—*Adult in summer:* General plumage sooty black, glossed with green, pure black on wings and tail; a large white patch on wing, oval in general outline, but interrupted by strong re-entrant wedge of black on distal margin. Bill and claws black, lining of mouth and feet carmine; irides brown. Plumage fading in late summer, color of wings and tail changing to gray, and white wing-patch becoming soiled with brown. *Adult in winter:* Most of head and neck, rump and underparts white; back and crown black, varied by white edgings; tail and wings black, with patch on latter clear white. *Immature:* Above chiefly sooty slate; below white, varied by sooty, chiefly in fine vermiculation; traces of wing-patch in outcropping white. Bill black; feet reddish black. *Downy young:* Sooty black. Bill and feet brownish black. Length of adult: 304.8-375.9 (12.00-14.80); average of 10 Monterey specimens: wing 182.9 (7.20); tail 50.8 (2.00); bill 33.2 (1.31); tarsus 35.1 (1.38).

Recognition Marks.—Teal size; dusky appearance; solid black with white wing-patch of ordinary plumage unmistakable; a strange pied gray bird in winter.

Nesting.—*Eggs:* 2, subelliptical; white, yellowish white, greenish white (pale glaucous) or, rarely, pale olive-buff, boldly and handsomely spotted or blotched with

Taken on the Southeast Farallon *Photo by the Author*

PIGEON GUILLEMOTS AT HOME

purplish black or rich dark sepia (which shadows or "washes" to tawny olive) and with more or less under-shell markings of violet-gray. Av. size 60.5 x 41 (2.38 x 1.61); index 67.7. *Season:* May–July 15; one brood.

General Range.—Breeding from Wrangel Island and the extreme northeastern portion of Siberia throughout the coasts and islands of Bering Sea; on the Asiatic side of the Pacific Ocean to Kamchatka and the Commander Islands, and on the American side south to the Santa Barbara Islands, California; retiring in winter from the northern portion of its range and found south to Japan and Lower California.

Distribution in California.—Fairly common summer resident, breeding about rocky headlands and upon islands south to Santa Barbara Island. Seldom seen in winter, when it probably stands out well to sea.

Authorities.—Cassin (*Uria columba*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 912 (Farallons); *W. E Bryant*, Proc. Calif. Acad. Sci., ser. 2, i., 1888, p. 30 (Farallon Ids., breeding; habits; desc. nest and eggs); *Wright and Snyder*, Condor, vol. xv., 1913, p. 88 (Santa Cruz I.; desc. nests); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 24 (s. Calif. ids.); *Bent*, U. S. Nat. Mus., Bull. no. 107, 1919, p. 167 (life hist.; desc. and photos of nest and eggs, etc.).

THE GENUS *Cepphus*, to which this Sea Pigeon belongs, enjoys a circumpolar distribution. The prevailing coolness of California's coastal climate in summer links us, curiously, with the Arctic; and we are favored, therefore, with the southernmost extension not only of this genus, but in the case of the Xantus Murrelet of the entire order *Alci-*

formes. The Pigeon Guillemot finds its center of distribution from Puget Sound northward; nevertheless, it is of fairly general occurrence as far south as the northern Channel Islands, and it has even been taken by Cooper on San Clemente.

The Guillemot is most in evidence in nesting time; and it enjoys a more uniform distribution at this season than in winter, when there are no local ties to bind it to a given stretch of water. The impression of scarcity during winter is strengthened by the fact that at this season the birds frequent the more open waters, where they avoid close approach, whether by row-boat or steamer; and that they present a totally different appearance. In winter they are clad for the most part in a suit of spectral gray, which resolves itself, only upon close examination, into a definite pattern, or mixture, of black and white. This plumage is taken on in September, but is exchanged for the solid nuptial black (with white wing patches) early in the spring—not infrequently by the middle of February, and occasionally by the 20th of January.

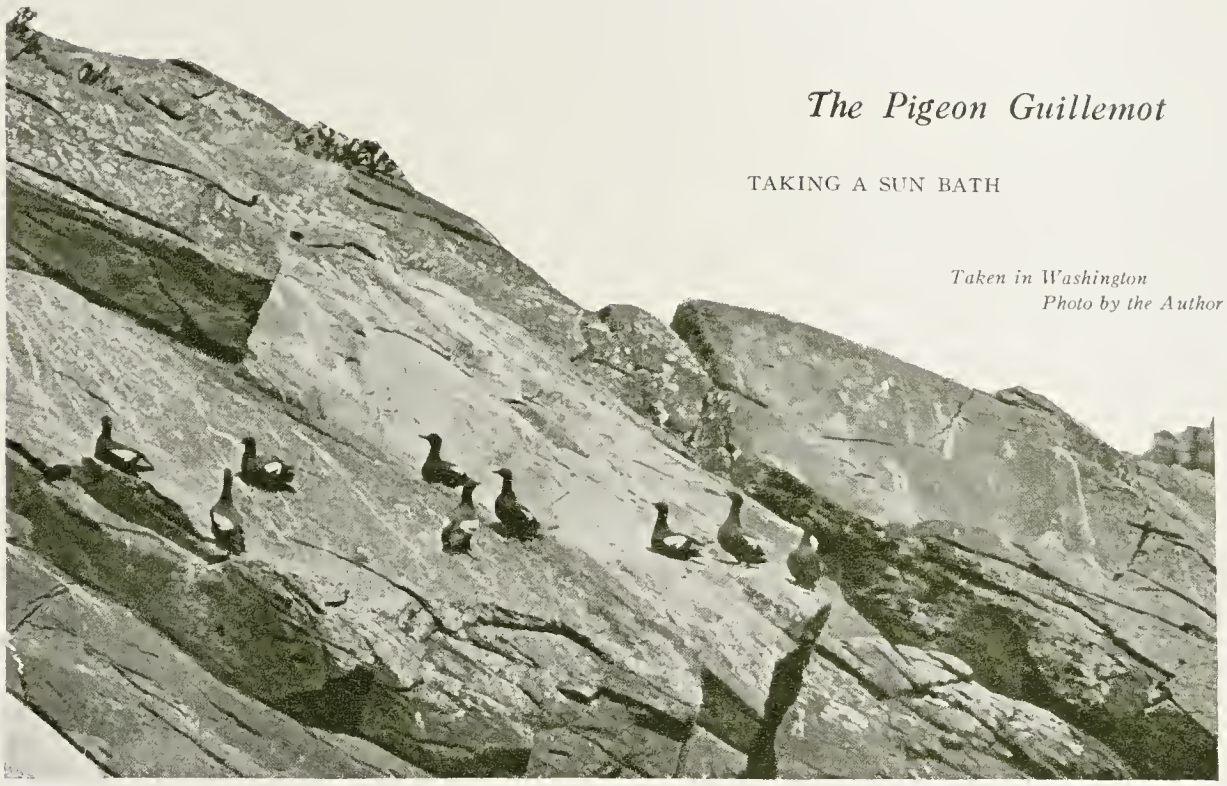
The birds are evidently proud of their "full dress" suits, and an envious company of "grays" will gather about some vigorous young buck who has come out in a new rig early in the season, and they will gape mingled admiration and chagrin, while the lucky fellow "stands on his tail" repeatedly with slowly fluttering wings.

On the Channel Islands, which are more or less protected from the prevailing winds which sweep the northern coast, the Pigeon Guillemots are occupying their nesting caves by May, and fresh eggs have been taken on Santa Barbara as early as May 15th. But on the Farallons and on the northern coastal rocks eggs are seldom found before the first week in June. With us, the birds have little need to provide artificial tunnels in the earth, as is their habit further north, but they nest instead in any available cranny from the water's edge to the summit of the cliff. On the mainland and sea walls or on the larger islands, the birds see to it that they are well out of reach of prowling foes. The water-worn caves of Anacapa and Santa Cruz, dismal and dripping with moisture, are favorite places of resort, eggs being placed on the floor or in any convenient cranny on or in the sloping talus of the crumbling walls. A more typical situation is provided by some isolated rock—as Prince Island—tenanted by several sorts of sea birds. The crest of such a rock will be dominated by Western Gulls, stern, rapacious, clamorous, but dignified and handsome withal. A sloping side of the rock may be crowded with Brandt's Cormorants, and a rocky shoulder by Farallon Cormorants. If the place presents a sheer seawall, Baird Cormorants will occupy its tenuous knobs and overhung ledges. Tufted Puffins to the number of scores or hundreds will circle about like unquiet spirits, silent, but ever mindful of the single

Taken on the S. E. Farallon *Photo by the Author*

A NESTING COLONY OF PIGEON GUILLEMOTS

WITH TWO EXAMPLES OF NESTS AND EGGS FOUND THEREIN



The Pigeon Guillemot

TAKING A SUN BATH

Taken in Washington
Photo by the Author

eggs stored away in cave or burrow. If the rock is a large one, it may boast a colony of California Murres, and a grassy stretch where Beal Petrels and Cassin Auklets nest. But whatever the character of the remaining population, the lower levels of the islets will boast of at least a few pairs of Pigeon Guillemots.

As one clambers over the rough sides of the rookery, these birds tumble out just ahead like sleepy children, and plunge with all speed into the nearest water, by way of getting their wits collected. After a refreshing dive, they join in turn the growing company of their fellows, who bob and hiss from beyond the kelp line.

If partially reassured the bird realights upon an exposed surface of the rock, and opens a carmine mouth of inquiry. Others join him, and soon your motives are being discussed by a whining company of these wondering wights. Their only note is a cross between a hiss and a whine, and it has no great power; but a large company of these birds can produce a mild chorus, which takes its place among those primal sea sounds which haunt the sympathetic soul forever after. It blends curiously with the voices of "the dry, pied things which be in the hueless mosses under the sea," and which are set a-murmuring when the tide runs out.

These Guillemots are not ungraceful while at rest, and it goes without saying that they exhibit the perfection of motion in the water; but on land they move about with an awkward shuffling gait, and in their shorter flights about the rocks they thrust out their great red feet cornerwise, and almost excite derision for their awkwardness.

They are, in the main, peaceable folk, and in the larger colonies are

gregarious to such an extent that one can rarely distinguish paired birds. On the whole, however, I am inclined to consider them strictly monogamous—at least in the avian sense, which takes account of only one season. Sportive pursuit often takes place in the water, and the rapidity with which these birds can appear and disappear at the surface would be instructive to the aspirants of the old swimming hole.

A cock-fight between rival suitors is apt to be quite a spirited affair. As they face each other upon the surface of the water, the combatants hold their tails, inconspicuous at other times, bolt upright; and this, with their open mandibles disclosing a bright red mouth and throat, gives the birds a somewhat formidable appearance. The actual scrimmage, however, is likely to take place beneath the water rather than upon it; and the onlooker has no means of guessing the battle's progress till the weaker bird bursts from the water like a flying fish, and so by change of scene gains a momentary advantage of his pursuer, or owns defeat outright.

In only one instance in California have I seen a breeding area which might be dignified by the name of colony. On the Southeast Farallon there are, or were in 1911, some two hundred birds. They nested sparingly all over the island and at any height, from 20 to 200 feet above tide. But there was one station, a great rock-slide just east of the lighthouse, which was entirely given over to them. Here they found shelter under boulders or in shaded crevices; and it was noticeable that they were almost always at pains to line the "nest" carefully with pebbles, granite fragments and bones or else with iron-flakes rusted out of the five-gallon kerosene cans flung from the lighthouse above. On the 3rd of June 1911, I found eight nests with two eggs each, the full complement, within an area of sixty feet square. Hard by were six more nests in which only one egg had yet been deposited, besides a dozen "empties."

The bold spotting and blotching of the Guillemot's egg, dark brown and lilac gray, on a lightly tinted or clear white ground, would argue an earlier or else an incipient habit of nesting in the open. And in the North I have found eggs which enjoyed no better protection than shadowing grass or weeds. The deposition of two eggs also indicates a possible affinity with the Murrelets, and a departure from the normal monotokous type of the *Alcæ*. I have taken one set (possibly a composite, however) of three eggs, and the M. C. O. has a set of three taken by Mr. John J. Boyce near Wrangell, Alaska, which is almost certainly the product of one bird.

Baby Guillemots are covered from the hour of hatching with a thick black down. Their feet are pale reddish black, and their bills black with a tiny white tip. This plumage, one may readily see, is protective only in so far as it comports with shadow; the young birds, therefore, have an

individual passion for obscurity. Brought to the light, the chick will not rest for the fraction of an instant, but is off instead in a tireless quest for a hidey-hole. One bird, in particular, which I was trying to photograph, nearly wore a hole through my Job stratum. I had labored with the creature for perhaps half an hour, in vain. Finally, I put it in the bottom of a canvas canoe, divested of all hope of shelter. Not for one moment would that pickaninny pause except through exhaustion, when its collapsed condition would have reflected, I fear, upon the artist, and might even have required explanation before the S. P. C. A. Upon recovery, instead of perking up and taking a momentary glance about, as a young gull would have done, it rose up and struck out for solitude, all with a single impulse which the waiting camera could not resolve.

Finally the chick won out. I returned it to its rocky cradle, and we both heaved a sigh of relief.

About the only way to find these little black rascals is to put your ear to the teeming rocks and listen for the subterranean peepings. They are adventuresome explorers, and it is doubtful if their own mothers can always find them.

No. 294

Ancient Murrelet

A. O. U. No. 21. **Synthliboramphus antiquus** (Gmelin).

Description.—*Adults in breeding plumage:* Head and neck sooty brown, changing to black on crown and nape, an invasion of white from underparts on sides of neck; a white stripe made up of sharply projecting white feathers, starts over each eye and, running obliquely backward and downward, nearly meets fellow on nape; touch of white on each eyelid; upperparts in general dark bluish ash, becoming brownish dusky on wings, especially the edges and tips; the sides of neck ("shoulders") sharply streaked with eruptive white feathers, like those of corona, upon a ground of sooty, which is in turn continuous with that of sides and flanks; remaining underparts, including lining of wings, pure white. Bill very small, the commissural length about twice that of culmen, yellow or whitish, blackening at base and (more sharply) on ridge; feet and legs yellowish with abrupt black line on back of tarsus; webs blackish, nails black. *Adult in winter:* More extensively and purely plumbeous, the black of crown duller and tinged with plumbeous; throat finely mingled sooty brown, plumbeous, and white, in endless variety of pattern; sides mingled plumbeous-gray (prevailingly), sooty black, and white, in bold patchy pattern; *special white feathers of corona and shoulders nearly obsolete;* invasion on sides of neck anteriorly *not* more extensive and *not* threatening to meet fellow across nape [Coues' statement to this effect has caused much misapprehension]. *Young of the year:* Like adult in winter, but white of underparts invading sides of head

and throat nearly to chin (where clouded with plumbeous dusky); black of head still more overlaid with plumbeous, the sides at first with terminal skirting of plumbeous dusky appearing as sharp transverse bars on white ground, then clearing to nearly uniform plumbeous ashy; white feathering of corona and shoulders merely indicated. It is not clear from material at hand whether the bird assumes adult characters the first spring; probably not. At any rate adult birds in Monterey waters are beginning to take on nuptial plumage in January, while unmodified juveniles are still to be found in March. *Downy young:* Underparts pure white throughout; upperparts chiefly mingled black and white, becoming pure black on top and upper sides of head, and on cervix, wings, and flanks. Bill black; feet and tarsi yellowish in front, blackish behind. Length of adult: 241.3-266.7 (9.50-10.50); average of 10 Monterey adults: length (skins) 259.5 (10.20); wing 133.6 (5.26); culmen 13.2 (.52); gape 27.4 (1.08); depth at rear convexity of culmen 6.9 (.27); tarsus 26.9 (1.06).

Recognition Marks.—Robin size; white crown-stripes distinctive in summer. In winter, nape more broadly sooty-plumbeous than *B. marmoratus*, bill much shorter and showing yellowish on sides; chin and throat washed (this being the general effect, it is really mottled) with plumbeous dusky, where *B. m.* is pure white.

Nesting.—Does not breed in California. *Nest:* a burrow in bank or crevice in cliff. *Eggs:* 2; elliptical ovate or elongate ovate, pale olive-buff to dull pinkish buff, marked faintly, finely, and rather uniformly with olive-brown and violet-gray. Av. size 61.1 x 38.6 (2.405 x 1.52); index 63. *Season:* April 20–July 28; one brood.

General Range.—Coasts and islands of northern Pacific Ocean and southern portion of Bering Sea; breeding from Alaska Peninsula west along the Aleutians to the Commander and Kuril Islands, and east to southeastern Alaska (Forrester Island). In winter south to the coasts of California and Japan.

Occurrence in California.—Fairly common winter resident on the ocean throughout the length of the State; occasionally visits the harbors.

Authorities.—Steineger (*Synthliboramphus antiquus*), Proc. U. S. Nat. Mus., vol. ix., 1886, p. 524 (Monterey); *Loomis*, Proc. Calif. Acad. Sci., ser. 2, vi., 1896, p. 17 (occurrence off Monterey); *Bishop*, Condor, vol. vii., 1905, p. 141 (Pacific Beach, San Diego Co.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 22 (s. Calif. ids.); *Bent*, U. S. Nat. Mus., Bull. no. 107, 1919, p. 132 (life hist.; desc. nests, egg, etc.).

AS IN THE CASE of the preceding species, but much more commonly, this old-man-of-the-sea spends his winters in California waters. Records of occurrence abound, but the favored observers, with one exception, have not given us any full account of the bird's behavior in winter. The happy exception is Mr. Loomis, who in the winter of 1894-95 was stationed at the Hopkins Seaside Laboratory:[1] "About five hundred yards from the surf, a belt of drift kelp, extending from the Seaside Laboratory around Point Pinos, had gained an anchorage on the rocky bottom. The narrow strip between this breakwater and the beach was the favorite resort of Ancient Murrelets, except on the rare days when there was a north wind, which invariably drove the bird life of the bay away from the exposed south shore. A good many were also found near

[1]Reported in Proc. Calif. Acad. Sci. 2nd Series, Vol. VI., 1896, California Water Birds, No. II—Vicinity of Monterey in Midwinter, by Leverett M. Loomis, pp. 17-18.

Ancient Murrelet

About ⅓ life size

From a water-color painting by Allan Brooks

the surf in the little coves in the direction of Monterey and some were seen miles out from the land. In the sheltered places they chiefly frequented, food appeared to be abundant. They were great divers and swimmers under water, and voracious in their pursuit of small fry, occasionally driving the fish to the surface in the eagerness of the chase. Often not a Murrelet would be in sight for some time. Then a pair or small company (the largest one observed numbered nine individuals) would suddenly appear from the depths. Unlike the Marbled Murrelets, they did not generally seek safety in flight when pursued. Neither did they dive as soon nor remain as long under water when keeping out of the way of the boat. If a white-cap developed near them they would always escape from it by diving. Although over a hundred were taken in the narrow belt near the surf, they were more numerous there toward the last than at the outset, new birds apparently coming in to take the places of those that had been shot."

Ancient Murrelets colonize in vast numbers upon various rocks and islands off the Alaskan shore. They nest in burrows, laying two neutral-tinted and elongated eggs, and the females are supported by the nocturnal visits of the male, as in the case of the Horn-billed Puffin and other birds of this group. A charming account[1] of the nesting on Forrester Island has been written by Professor Harold Heath, of Stanford University, from which we quote the concluding paragraphs.

"The journey of the young to the sea is one of the most interesting sights on the island, and by the aid of a lantern was witnessed on several occasions. The pilgrimage is made during the night within a day or two after hatching, and is evidently initiated by one or both of the parents, who take up a position on the sea not far from the shore. Here, about midnight, they commence a chorus of calls resembling the chirp of an English sparrow with the tremulo stop open, and in response the young, beautiful, black and white creatures, as active as young quails, soon pour in a living flood down the hillsides. Falling over roots, scrambling through the brush or sprawling headlong over the rocks, they race at a surprising rate of speed drawn by the all-compelling instinct to reach the sea. They may be temporarily attracted by the lantern's light, and flutter aimlessly about one's feet; but sooner or later they heed the calls and once more plunge down the slopes. Almost every night during these migrations the surf was pounding violently on the rocky beaches, and many times one could see the young swept off the cliffs, and after struggling a moment in the waves they disappeared from sight and seemed doomed to destruction. Notes made at this time run as follows: 'The tremendous violence of the breakers, churned to foam on the low yet

[1] The Condor, Vol. XVII., Jan. 1915, p. 35.

precipitous cliffs, have destroyed birds of larger size and smashed boats to splinters. It is therefore altogether probable that the life of many of these delicate and diminutive birds is snuffed out during each migration.'

"To test the correctness of this observation a young murrelet, which came down the slopes early one evening, was liberated on the beach close to the dashing surf. Without a moment's hesitation, and without the stimulus of a parent's call it plunged boldly into the water, poised a moment on the summit of a great foam-crested wave, and dived with surprising speed and accuracy to reappear ten seconds later as many feet at sea. A momentary appearance, another dive and still another carried it beyond the swirl of the surf, and, swimming rapidly and paddling across patches of kelp always in a bee line, it soon disappeared from view. It is evident therefore that the last sentence of the preceding paragraph is in need of revision."

No. 295

Marbled Murrelet

A. O. U. No. 23. **Brachyramphus marmoratus** (Gmelin).

Synonyms.—Townsend's Murrelet. Wrangel's Murrelet.

Description.—*Adults in breeding plumage:* Upperparts brownish black everywhere save on wings, cross-barred with bright rusty or chestnut, and with lingering traces of plumbeous; primaries blackening distally, changing to gray on inner webs basally; a few white touches on scapulars; lining of wings brownish black; entire underparts, including sides of head and neck, mottled white and sooty brown (the pattern varying individually, but usually heaviest on chest and sides); the flanks also spotted with rusty. Bill black; backs of tarsi and webs of feet blackish, fronts of tarsi and tops of toes flesh-color. *Adult in winter:* Entire underparts pure white, the color encroaching on sides of head to lore, on sides of neck nearly (but never quite) meeting behind, on sides of rump leaving dark area an inch wide; upperparts chiefly plumbeous, changing to blackish on crown, wings, and tail; feathers of back, etc., with blackish centers and some ashy edgings; scapulars chiefly white, forming conspicuous patches; greater wing-coverts narrowly edged with white. Specimens exhibit every intermediate phase between these two extremes according to age (?) and season. *Immature* (first plumage): Upperparts like adult in winter, but blacker without plumbeous; white of scapulars restricted; underparts chiefly white, but finely barred or wavy-marked, save on chin, belly, and crissum, with sooty brown. Length of adult: 254 (10.00); wing 127 (5.00); bill 16.5 (.65); depth at base 6.1 (.24); width 5.1 (.20); tarsus 17.8 (.70).

Recognition Marks.—Robin size; in winter (when oftenest seen) to appearance a miniature California Murre; black (plumbeous) and white coloration; sharp tapering bill with long sloping forehead; short-necked and low-lying, as compared with Horned Grebe; form elongate as compared with the smaller Auklets; chin white, nape more

narrowly sooty, bill longer and more uniformly black, as compared with the Ancient Murrelet; larger, lighter above, plumbeous dusky instead of slaty black, and upperparts more extensively invaded by white, as compared with the Xantus Murrelet.

Nesting.—Not known to breed in California, but probably does so. *Eggs:* 2; probably placed at end of short burrow in mountainside, many miles from water; elliptical ovate; pale bluish green (glaucous), finely and sparingly spotted with blackish brown. Size about 62 x 35 (2.44 x 1.38).

General Range.—Pacific Coast of North America from the Alaska Peninsula south to San Diego; breeding in the mountains (?) south to Santa Cruz County, California.

Distribution in California.—Resident in winter on the ocean throughout the length of the State; rarely seen in harbors. A few remain through the summer, and evidently breed in the coast ranges.

Authorities.—**Cassin** (*Brachyramphus marmoratus*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 915 ("California"); *Loomis*, Proc. Calif. Acad. Sci., ser. 2, vi., 1896, p. 19 (off Monterey); *J. Mailliard*, Condor, vol. vi., 1904, p. 15 (Monterey, June and July); *Bent*, U. S. Nat. Mus., Bull. no. 107, 1919, p. 141 (life history).

THE EASTERN visitor, even though admonished by his San Francisco friends, will never understand why he should bring an overcoat *in summer*. It is for the reason also that notably "refreshing" breezes playfully romp anywhere from Crescent City to Point Conception on a summer afternoon, that Dr. Grinnell, veteran ornithologist of the West, could only say of the Marbled Murrelet: "Fairly common winter visitant on the ocean coastwise"; adding, rather tamely, "Has been found in June and July on Monterey Bay." No; the summer waters of Alta California are not suited for extended exploration a la skiff; and for this reason the author will beg the privilege of introducing his protégés from a northern station, and then of making some pertinent remarks about the Marbled Murrelet as a breeding bird of California.

For those who long for "something different" we recommend a steamboat ride along, say, the Straits of Georgia, or across the eastern arm of Juan de Fuca on a blowy day in December. To be sure it is a bit chilly out, and there are spiteful dabs of rain between whiles, but the forward deck is clear, for the helpless ones are crowded in the cabin playing poker or scowling gloomily out of the windows. We may have the bow to ourselves—you and I—and what a glorious company of sights and sounds there are about us! Every blue-gray wave has a voice, and the gray-blue wind tries every tone with its deft fingers. The chorus smites upon the prow with its never-ending climaxes of spray, to which our staunch boat opposes only its patient methodical sighing. Now the wind laughs, and while it marshals its serried ranks for a fiercer charge, our drummer boy, the trusted flag-rope, beats furious tattoo. Crash! Poof! Poof! We win!

But there are those who enjoy the conflict of the storm even more than we. Above the whining of the waters and the crashing of the prow, come shrill exultant cries, *Meer - meer, meer - meer.* The Murrelets are in their element, and they shriek to each other across the dancing waters like Tritons at play. Perhaps association will partly account for it, but somehow the note of the Marbled Murrelet seems of itself to suggest piping gales and rugged cliffs beset by pounding surf. It is the articulate cry of the sea in a royal mood. And not a thousand Murrelet voices are required to transport the hearer to Alaska forthwith.

Save in summer, the Murrelets appear chiefly in pairs, and it is interesting to note the harmony of action in the case of mated birds. They sit upon the water, usually abreast, from one to four feet apart, and in flight they maintain the same relation. In rising from the water they do not patter, after the fashion of the grebe, but burst out by a sudden effort. They do not, however, always succeed in getting quickly under way, for they sometimes bump along over the surface like a skipping stone, and are even quite baffled if they are called upon to clear an unusually high wave. Once a-wing, however, they vibrate the pinions with extreme rapidity and appear to move like winged bullets.

Because so agile, they are often quite venturesome, and the pursuit of fish is sometimes carried on before a wharf-load of beholders. About the docks of one of the navy-yards these birds are especially fearless. They look like little men-of-war themselves, as they lie at anchor on the surface of the water; but when they get news from below by wireless, they are off like a flash, down, down into the cool green depths. They do not swim under water, but fly rather. At first one may see the wing-strokes, incisive, rapid; then only the quickly disappearing white of the bird's nether parts is visible; and lastly, a slowly rising line of bubbles which mark the first dozen feet or so of the diver's course. When surprised at close quarters by a steamship, the bird oftener escapes by diving than by flight, and so confident is he of his powers in this regard that he tarries to indulge the last possible moment of curiosity before going below.

The nesting of the Marbled Murrelet is one of the most fascinating mysteries in the annals of the West. The presumption was that eggs would be found on rocky islets in burrows, quite after the fashion of the Ancient Murrelet; but all such claims are now discredited. The only indubitable egg was taken by George G. Cantwell, May 23rd, 1897, from the oviduct of a female shot by a Haida Indian boy. The older Indians, when questioned, affirmed their belief that the birds bred high up in the mountains in hollow trees. The "hollow tree" touch is doubtful, for no bird of this group could "dock" in a hole in a tree with sufficient accuracy to guarantee a continuance of the race. But the mountain

tradition has slowly gained credence, and there is an account of an egg, now in the collection of Mr. Chas. E. Doe, of Providence, R. I., which was taken by Mr. A. H. Durham from rocky land some seventy miles north of Nome. I am firmly convinced that these birds not only nest in or upon the sloping sides of western mountain ranges, but that they nest in some numbers on the coastal ranges of California. Here is my line of evidence from the beginning: At Glacier, on the North Fork of the Nooksack River, in the State of Washington, and near the foot of Mount Baker, having risen before daybreak for an early bird-walk, on the morning of May 11th, 1905, I heard voices from an invisible party of Marbled Murrelets high in air as they proceeded down the valley, as though to repair to the sea for the day's fishing. It was too late in the season for migratory flight, and the Murrelets are not known to visit interior waters, at least in the summer season.

MARBLED MURRELETS

The Quileute Indians, of the west Washington coast, claim that the Marbled Murrelet, the *Tichaahlukchtih*, does not nest like the other sea-fowl, upon the rocky islets, the Olympiades, but that it colonizes upon some of the higher slopes of the Olympic Mountains, where they lay their eggs in burrows; and one of their number claims to have come upon such a colony several years ago while hunting in company with a white man. I have toured the Olympiades three different seasons in Indian canoes, and I found my Indian guides infallible in the identification of sea-birds. The Marbled Murrelet certainly does not nest on any of the islands, where birds of thirteen other species are known to breed.

Of the Marbled Murrelet as a possible summer resident of California we have only the following scanty references: "We have quite a number

in our collection taken on Monterey Bay in the month of July, and one in June" (Joseph Mailliard, Condor, Vol. VI., Jan. 1904, p. 15); "The Marbled Murrelet appeared (at Monterey) early in July but it did not become common until at the end of the month" (Loomis, California Water Birds, No. 1, 1895, p. 211.)

On the eighteenth of May, 1914, while in camp with a party on "Major Creek," at a point well up in the foothills of the Santa Cruz Mountains, I roused at early dawn to see a dark meteor crossing the sky and going down the valley in a fashion which suggested an Auklet or a Murrelet; but because the bird was silent, I let the incident pass unchallenged. When, however, some fifteen minutes later I heard cries, *meer, meer*, as familiar as the voices of childhood, I sprang to my feet. Two pairs of Marbled Murrelets passed overhead in full cry, each going straight down the valley at a height abou ttwice that of the surrounding redwoods. The following morning, Sunday, I believe, as I lay dozing, the cries of Murrelets again aroused me, and I woke up to count six passing parties, all descending. Somewhere on the slopes of Ben Lomond there is a nesting colony of Marbled Murrelets, and these birds were returning to seaduty after spending the night with their mates or young.

In June, 1916, we made our oölogical camp about half a mile back from the ocean near Trinidad, in Humboldt County. I soon began to suspect the presence of Marbled Murrelets from distant lispings; but it was not until the evening of the 20th, at about 7:30, that a party of them passed almost directly overhead *bound for the interior*. On the evening of the 22nd, and again on the morning of the 23rd, I had the good fortune to note both the landward and seaward passage of Marbled Murrelets. Some birds passed quite low over our camp, at 7:50 in the evening, on the way to their mountain (?) nesting site, and birds were heard returning at 4:15 the following morning. I repeatedly observed a Marbled Murrelet in full breeding plumage in the harbor of Trinidad on the evening of June 24th.

On the morning of July 1st, having spent the night with Mr. and Mrs. H. E. Wilder of Carlotta, we rose for an early start, and were immediately greeted by Murrelets. Thrusting head out of window, I distinctly heard two birds as they made their way down the valley. This time we were twenty miles from tide-water. Somewhere on the slopes of the Trinity Mountains there is a breeding colony of Marbled Murrelets!

No. 296

Xantus's Murrelet

A. O. U. No. 25. **Endomychura hypoleuca** (Xantus).

Synonym.—White-bellied Murrelet.

Description.—*Adult:* Above and on sides (including axillars) slaty black, the plumbeous tone faintly differentiated as skirting of feathers on back and wings; a touch of white on either eyelid; below pure white, the lining of wings either pure white or mingled in varying proportions with smoky gray. [Most published descriptions of *E. hypoleuca* give "wing-lining pure white" as a diagnostic character, and the name *Endomychura* (*Brachyramphus*) *craveri* (Salvadori) has been given to an alleged southern form on the sole ground of smoky gray wing-lining. But the fact seems to be that *E. hypoleucus* exhibits every degree of gradation from pure white to pure smoky. At any rate, every variation within these limits is found off Monterey in winter. If this be not the true explanation, then a new form having wing-linings of pure white and *characterized by a shorter beak* must be set off from the bulk of mottled smoky-and-white birds—and there is material in the Berkeley museum to support such a view.] Bill black; iris brown; feet "whitish blue." No recognized seasonal changes. *Downy young:* Above bluish black; below pure white. Bill black; feet paler. Measurements, average of 10 Monterey specimens: length 246.8 (9.72); wing 118.2 (4.65); bill 19.4 (.76), depth at angle of gonys 5.4 (.21); tarsus 23.7 (.93).

Recognition Marks.—Robin size; black above, white below; amphibious habits. Requires careful distinction from *B. marmoratus* (see under foregoing).

Nesting.—*Eggs:* 1 or 2; placed at end of short burrow or in crevice or cave, or under rock of sea-girt islet; variable in shade, and often exhibiting the most abrupt diversity between "mates," dull white (rarely), olive-buff, greenish olive-buff and pinkish olive-buff (avellaneous) to dull tawny olive or even dresden brown and cinnamon-brown; marked variously with purplish black, brownish black, deepest chocolate or intense bister. Some specimens are nearly immaculate; in others the color is finely and uniformly sprinkled over the entire surface; others are "cloud-capped" or handsomely wreathed about the larger end. Av. size 53.5 x 36 (2.11 x 1.42); index 67.3. *Season:* March–July; one brood. (The extremes of the season probably represent the activities of diverse stocks or tribes.)

General Range.—Coasts and islands of southern California and western Lower California. Breeds sparingly as far north as Anacapa Island, and wanders further at the close of the breeding season (?), probably as far as Tomales Bay (Nov. 10, 1910).

Authorities.—**Coues** (*Brachyramphus hypoleucus*), Proc. Acad. Nat. Sci., Phila., vol. xx., 1868, p. 64 (coast of Calif.); *Beck*, Proc. Calif. Acad. Sci., ser. 4, iii., 1910, p. 60 (Monterey Bay; occurrence; crit.); *van Rossem*, Condor, vol. xvii., 1915, p. 74, figs. (crit.; relationship of *hypoleucus* and *craveri*); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 22 (s. Calif. ids.; habits; occurrence, etc.).

THE OPEN SEA is its home. Our little diver finds safety and food far from land and the waiting enemy, the grim Duck Hawk. On or near the surface it rides out storm or sunshine until darkness makes possible a return to its island.

If a heavy wind brings white-caps too close, it dives into and through the waves, emerging in the trough. And it is here that one of the tragedies of its life is enacted. At the times of the real south-easters, when day after day the sea is piled mountain high and the tiny prey seeks stiller and deeper waters, then many a poor murrelet, weak from hunger, faces a struggle with the elements that calls for every reserve of vitality and endurance. The bodies strewn upon the beaches after every big storm bear evidence of the number that have failed.

But on a typical summer day it rests on the glassy surface, rising and falling with the gentle swell. With its mate, or perhaps a small family group, it searches for the marine invertebrates on which it feeds. Sometimes one bird, or both, disappears for a moment, attracted by food a few feet below. If disturbed or frightened it flies, not far, not straight, but with surprising velocity, curving until it again drops into the water.

Its range is the vicinity of the southern California islands. From the Santa Barbara group on the north, straggling as far as Monterey Bay, it is the only resident murrelet to be found until it meets its cousin, the *craveri*. Their point of intergradation is somewhat indeterminate, but probably occurs about four hundred miles below the California-Mexican boundary, in the vicinity of Cedros Island. Sixty years ago two specimens of the Xantus were taken near Cape San Lucas, but the use of that record in describing the present day distribution would be misleading.

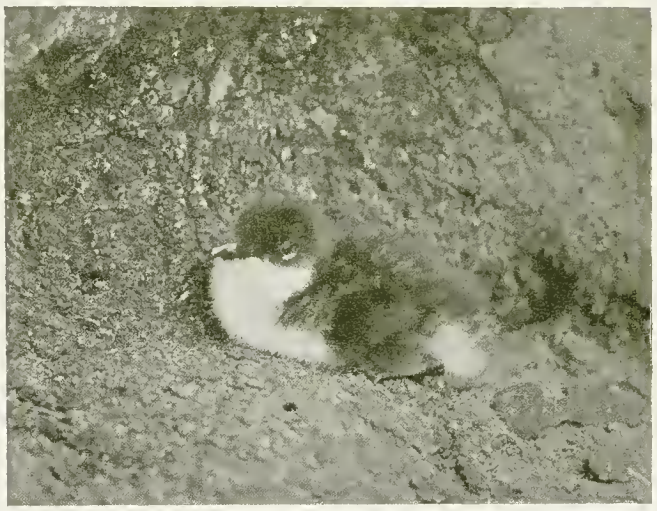
Taken on Los Coronados Islands, L. C. *Photo by Donald R. Dickey*
ADULT XANTUS MURRELET ON EGGS

Within its area it is likely to be confused with only two other birds. The Ancient Murrelet, which often comes down in mid-winter, is decidedly larger, and has fourteen rectrices instead of twelve. The Cassin Auklet is slightly smaller, but its breast is a brownish grey instead of an immaculate white.

It is early summer; we are in a fishing boat, cruising. There is hardly a breath of air, not a ripple on the water save

where broken by fish or bird. Ahead are two dark specks—we change our course so as to pass within fifty feet. They do not allow so close an approach. There is the flap, flap, flap of their sturdy little wings on the water and they are in full flight, barely skimming the surface. Now we see the white breast, becoming more distinct as they characteristically cross our bows, and we have positively identified the Xantus Murrelet.

They soon alight and resume their search for food. It is sometimes to be found on the surface, sometimes to be obtained by diving. It is then that the small loon-like wings become useful,—the wings which, though they enable the bird to attain tremendous speed in flight, cannot launch it from the ground. Once under water the feet are little used; it is these short heavily muscled wings with which it propels itself.



Taken on Anacapa Island *Photo by Dickey*
XANTUS MURRELET CHICK

If we wish to see it at rest, we must follow it to its breeding grounds on one of the islands and be prepared to make a diligent search. We go to a known colony but not a bird is to be seen. On guard is the deadliest of falcons, the red demon of the sky from whom there is no escape. So we climb and crawl over rough and crumbling rock, through thick scrubs, up and down the steepest inclines, until, under the face of a weathered sandstone cliff, we find some broken egg shells—shells of a light tan color, spotted with lavender and brown.

These are from a past season. But this Murrelet has a well-marked habit of returning to former nesting holes, so we scan the cliff for a likely crevice. Eight feet above our heads the soft stone has weathered. We climb to where we can look in, and there, five feet into the recess, sits a small black bird.

We know we have found the colony so we begin a systematic search of the ravine, from the water's edge to the top of the island, six hundred feet above the sea. The sites the birds choose are almost endless in variety; what they demand is some natural hollow into which they may crawl and be in the dark. This is usually found in soft rock; it matters little to the birds whether on an imposing precipice or in a jutting rock two or three feet high. Often a cave, large or small, will suit, especially a remote corner where the roof is but a few inches from the floor. Often

they will crawl under thick vegetation to lay, if their other requirements can there be met.

The Xantus Murrelets have many nesting characteristics which are worthy of note, or which, not fully understood, have given rise to many errors in bird books. They are decidedly gregarious in their breeding sites. For example, on the Coronado Islands, just below the Mexican border, there are three well defined colonies on South Island. Yet five miles away, on North Island, which swarms with Cassin Auklets, gulls, pelicans, and cormorants, no Murrelet's nest has ever been discovered.

Taken on Anacapa Island *Photo by Dickey*
EGGS OF XANTUS MURRELET, IN SITU

The individual birds of most species nesting in this manner will lay almost at the same time. Not so the Xantus Murrelet. On any day in the late spring or early summer eggs exist in every state of incubation. I have obtained from the original data blanks of Mr. Nelson Carpenter, making due allowance for condition, proof that in one of the colonies referred to on South Island there have been eggs continuously from the earliest part of April to the twentieth of July,—a period of over three and a half months. On May first of this year (1921) I examined nests containing a downy young, sets of half incubated eggs, of fresh eggs, of eggs on the point of pipping, besides numerous shells the conditions of whose membrane showed that they had hatched this spring.

This disposes of the theory of two distinct nesting seasons. These birds are merely following individual idiosyncracies in their nesting dates. They do not at any time congregate in flocks; when found in groups larger than three or four, it is merely a matter of accident. So when they come to their breeding grounds, they do so independently of each other. The result is violent fluctuations from year to year, and a season which, while

ordinarily reaching its hey-day in May, spreads broadly both ways.

In the day time the male bird is on the nest. I make this statement with a little hesitation, for my opportunity to check it has been limited. He is so quiet that not a sound is to be heard even when the colony is being invaded. In fact the only known note of these birds is the low piping whistle exchanged between the mates when they relieve each other from duty. He makes no show of resistance or protest if the eggs are taken by hand or scoop, even if he himself is dragged from the nest, and he never "flushes." Catch one and throw him into the air. He will drop just as near the ground as he can fly, inches above the rocks, and make a bee line down the steep island side to the water.

The normal set of eggs is generally given as two, but this is an error. I have the complete record of the 96 sets collected by Mr. Carpenter, to which I have added the last four taken in his presence to bring the figure to an even hundred. They show one set of four eggs; four sets of three eggs each; forty-nine sets of two eggs each, and forty-six of one each; total one hundred sets. Undoubtedly some of the sets of one, if undisturbed, would have had a second egg. But a study of the data shows that the ratio of sets of one and sets of two is nearly even, and would not exceed 3 to 2. The number of eggs should be given as either one or two. I have made a special examination of the set of four. It is one set and the work of one bird beyond any ground for argument.

It is worthy of remark in this connection that in not one of these hundred quoted cases or any others that I have been able to find has the bird made an attempt to improve its nesting site, either by burrowing or by bringing in soft material on which to deposit its eggs. This is the more surprising from the fact that the shells are not particularly strong, and the number that crack through contact with the bare rocks is very large.

The eggs are almost as large as those of the domestic hen—some egg for a bird of this size! They show an endless variation in color, even within the sets, from dark chocolate to plain sky blue. The majority are yellowish-gray with spots and blotches of green, purple, or brown. But there is no coloration that could be called typical.

That more details are not known of the life of these birds is because at sea they are difficult to observe, and ashore they are nocturnal. If you camp in one of their colonies you will be disturbed soon after nightfall by the inrush of the birds. They give an undeniable impression of being frightened,—rattled. Amid great confusion they exchange places on the nests; a process repeated again just before day-break, accompanied by bangings against the ground and the rocks that an aviator would term poor landings.

The downy young that are about three days old add to the confusion, for they choose the night to start their hegiras. Without guidance or path they tumble off rocks, fall from cliffs, downward, ever downward, until caught by a smashing wave at the shore. And here all trace of them is lost, until we find them again as adults.

GRIFFING BANCROFT.

No. 297

California Murre

A. O. U. No. 30a. **Uria troille californica** (Bryant).

Synonyms.—CALIFORNIA GUILLEMOT. CALIFORNIA EGG-BIRD. FARALLON BIRD.

Description.—*Adult in summer:* Head and neck all around warm sooty brown, changing on upperparts to dark brownish slate, feathers of back and rump with a little pale grayish brown edging; underparts from throat abruptly pure white, the sides shaded or striped with sooty; wing-linings white, varied with dusky; secondaries narrowly tipped with white; a sulcus, or groove, in plumage behind eye. Bill and feet black; irides brown. *Adult in winter:* Similar, but white of underparts extending to bill, and invading occiput till only a narrow central stripe of black remains, shading on head enough to outline a dusky stripe behind eye. *Immature, first winter:* Like winter adults, but white not invading occiput, and less extensive on side of head, with some dusky clouding on jugulum. *Chicks* are white centrally below and brownish dusky above, with lance-linear projecting white feathers on head and neck. Length of adult 381-457.2 (15.00-18.00); av. of 10 Monterey specimens: length (skins) 439 (17.3); wing 206.3 (8.12); bill 44.8 (1.76), depth through angle 13.3 (.52); tarsus 38.8 (1.53).

Recognition Marks.—Crow size; black and white coloration; aquatic habits; sharply pointed wings; rapid, graceful flight; tapering head, slant of forehead nearly conformable to that of bill.

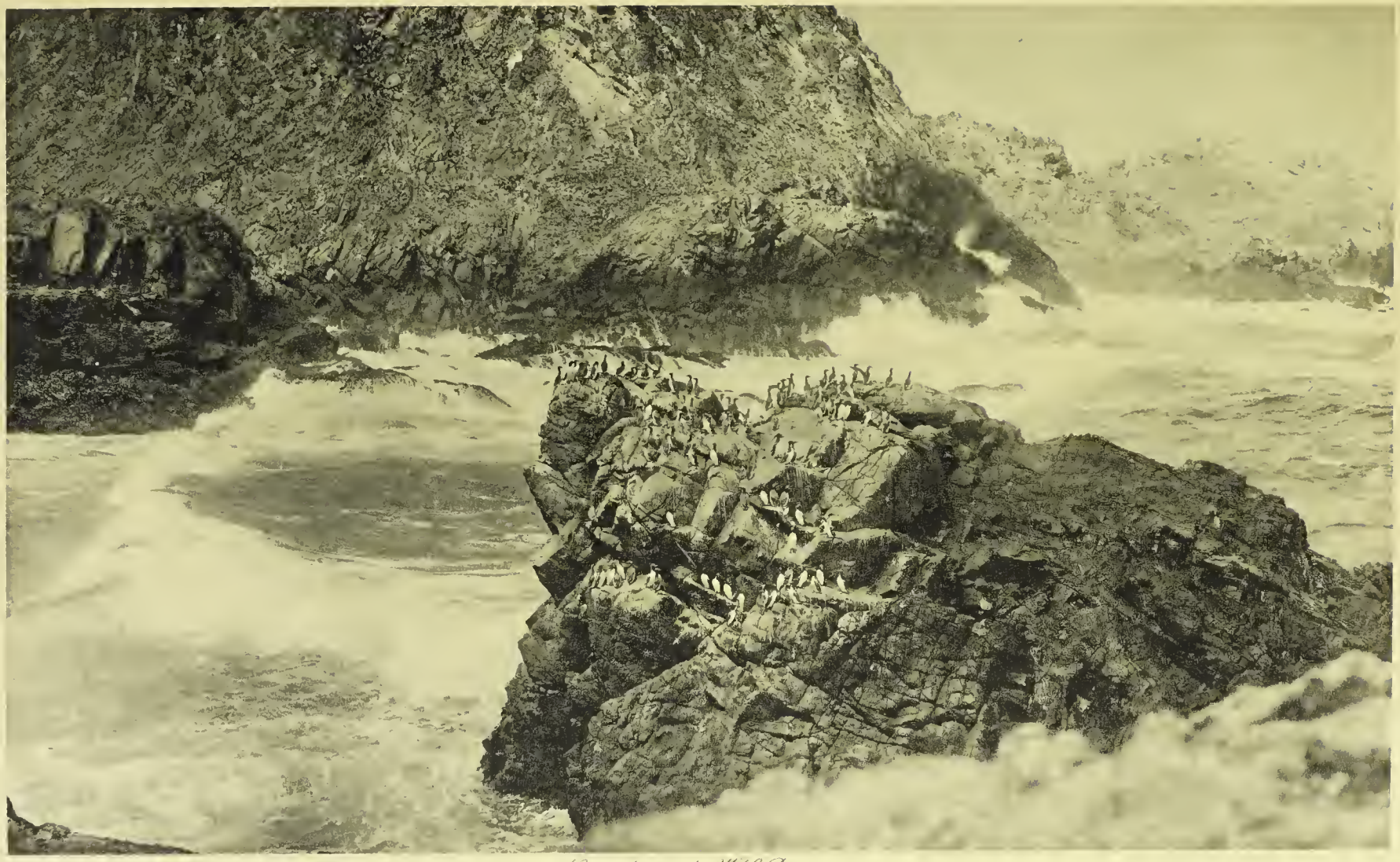
Nesting.—Single *egg*, laid on ledge of rock, in cranny or in cave; sharply tapering at one end, very variable as to ground-color, ranging through white, grayish- bluish-, or greenish-white, to deep sea-green, and variously marked, spotted, scrawled, or stained with brownish or purplish black and such self-tones as ecru-olive, clay-color, Prout's brown, sayal brown, walnut-brown, and snuff-brown, or even, rarely, chocolate. Av. size 82.2 x 52.2 (3.24 x 2.055); index 63.5. *Season:* June (March 6–July 25, Bent).

General Range.—Coasts and islands of the northern Pacific Ocean, Bering Sea, and the adjacent portions of the Arctic Ocean. Breeds from southern California north to Norton Sound, the Pribilof Islands, St. Matthews Island, the Aleutian Islands, and the Commander Islands. At other seasons recorded north to Wrangel Island and south to northern Japan.

Poseidon Club—The Lounge

California Murres on Outlier, Farallon Islands

From a photograph, copyright 1923, by W. L. Dawson



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Distribution in California.—Common resident on the ocean, usually well off shore. Breeds in large numbers on the Farallons; in lesser numbers south to Prince Islet off San Miguel, and upon the rocks of Humboldt and Del Norte counties. South in winter at least to Newport Beach ,Orange County (van Rossem).

Authorities.—Newberry (*Uria troile*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 110 (Farallon Islands); *H. Bryant*, Proc. Boston Soc. Nat. Hist., vol. viii., 1861, p. 142 (*Catarractes californicus*, orig. desc.; type locality, Farallon Islands); *W. E. Bryant*, Proc. Calif. Acad. Sci., ser. 2, i., 1888, p. 31 (Farallon Ids.; breeding habits, etc.); *van Rossem*, Condor, vol. xvi., 1914, p. 144 (Newport Beach, Orange Co.; southernmost record station).

THE AUK-TRIBE is an ancient race which has long occupied northern waters. Although circumpolar in distribution, its two centers of abundance lie in the North Pacific and the North Atlantic, respectively, with a present showing of twenty breeding species (and subspecies) for the former and six for the latter. This leaves three forms *Alle alle*, *Cepphus mandti*, and *Fratercula arctica naumanni* as exclusively Arctic breeders. And if the Atlantic should boast the former grandeur of the Great Auk, *Plautus impennis*, whom hungry sailors slew, the Pacific is able to point with pride to *Mancalla californiensis* Lucas, of Los Angeles, a Miocene Alcad of equal height and girth—and helplessness; for it, too, was flightless. But, indeed, who living in Los Angeles would care for wings?

The name of California, viz., *californica*, likewise attaches to the Pacific representative of the Old World Murre, *Uria troille*. The reputation of this bird has been so largely made on the Farallon Islands, that we are likely to forget that the species enjoys a fairly uniform distribution from the northernmost of the Channel Islands, viz., Prince Island, north to the rocks in Norton Sound, Alaska.

As we approach one of these lesser citadels, some gaunt fastness which the sea birds have known for ages as home, our presence will not pass unnoticed. Scouting puffins, shags, and gulls will have reported us unfavorably to their waiting companions; while the Black Oyster-catcher, that prince of yellow journalists, will have published a lurid account of our misdoings, when as yet we are a hundred yards removed. Conspicuous among the anxious, hurrying throng which expects our approach, are bevies of California Murres, swifter of pace and more graceful in motion than either puffins or cormorants; and they go hurtling about without apparent object other than to maintain their share of the general excitement.

The Murres, however, are easily satisfied, and will soon return to their ledges to await our more particular inspection. Whether we land from skiff, launch, or canoe, the landing will engage all our attention. For

it's easy to fly, and it's easy to sail, but Mother Earth is jealous of such defection, and we dare not return too suddenly to her bosom. The dread of a bad landing haunts the most seasoned sea-farer, as the pangs of approaching maternity haunt a woman; but once the travail is past, there

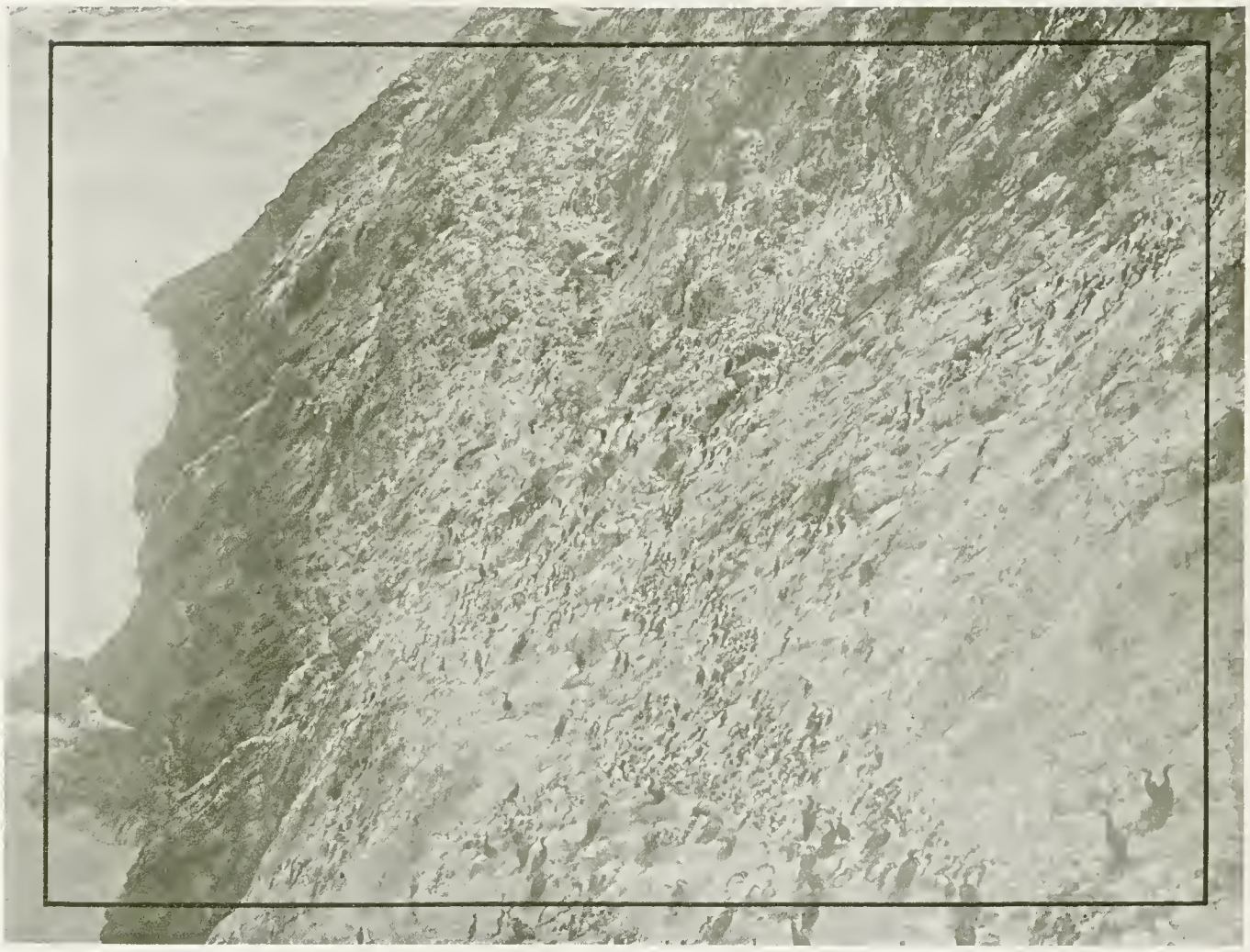


Photo by the Author

THE ANCIENT STRONGHOLD OF THE RACE
BREEDING LEDGES OF CALIFORNIA MURRES ON THE NORTH SLOPES OF THE SOUTHEAST FARALLON
BRANDT CORMORANTS IN THE FOREGROUND

is no joy like the joy of ornithological conquest on a sea-girt isle. The Murres come first in interest, and intent upon the Murre ledges we hasten by the clamoring gulls or crowd through a colony of croaking shags. At its best a Murre ledge presents a solid mass of birds, for the males spend much time ashore in company with their mates. Upon approach, however, the males detach themselves and resume anxious circlings in the

air, while the females remain huddled together, shifting uneasily upon their eggs, or backing away from the nearest ones, uttering apprehensive *hows*. All the birds in turn bow extravagantly, using only their heads and sinuous necks, and so frequently that a colony viewed from above looks something like a grain field under a breeze.

If the intruder does not press his advantage too hotly, those that have retreated from their eggs make shuffling feints at return, aided occasionally by their wings. Those that have found their eggs bend low to inspect them, or use the bill to assist in thrusting them between their legs. Others pause now and then to yawn or to stretch the wings, beating them rapidly three or four times before refolding. This is when the birdman seats himself on the white-washed ledge, Turk-fashion, places the camera in his lap and begins to shuffle forward like a legless beggar, "snapping" momentarily. The strain of approaching danger begins to tell on the Murrine nerve; but when the last mother has fled, we have before us such a varied assortment of eggs that regret is lost in wonder.

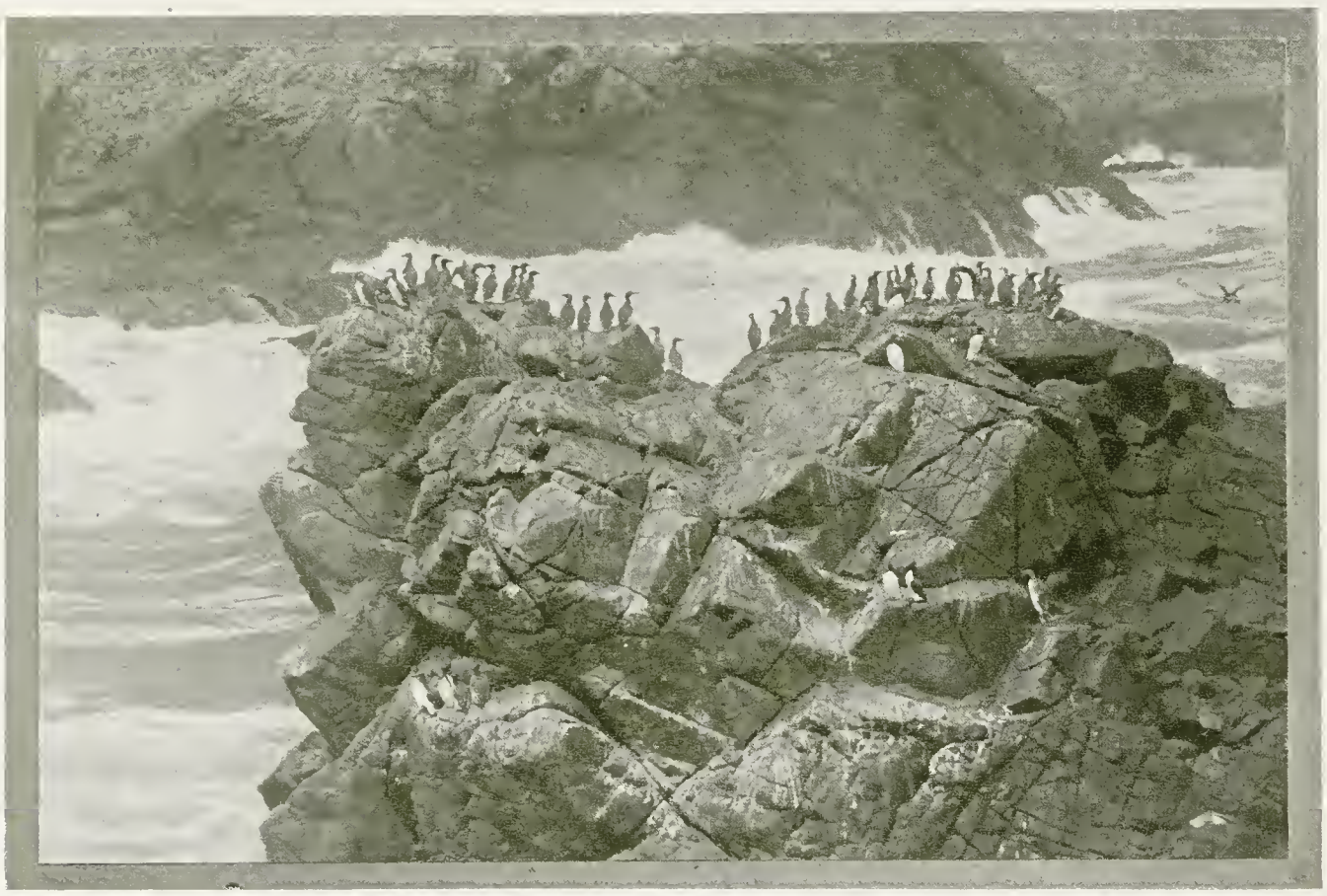
Taken on Carroll Islet, off the coast of Washington *Photo by the Author*
EXPOSED LEDGES

Murres' eggs are the Majolica ware of every bird-egg collection. In ground-color varying from pure white and delicate grays to beryl-green or even sea-green, they are speckled, splattered, blotched, and daubed with browns and blacks of a hundred shades. The more lightly marked specimens may have nothing by way of ornamentation beyond faint vermiculations of pale oil-green and tawny olive, or else tiny irruptions of sordid lavender and Indian purple; but others may be scrawled like a blackbird's egg with purplish blacks, or buried, like a hawk's, in a smudge of chestnut-rufous. One specimen in the M. C. O. collection exhibits a five-rayed rosette of carob-brown on a whitish ground. Another bears a maze of

arabesques which it would vex Mohammed's self to read. A third carries a pattern in lilac which must have cooled a long age in the tomb of some Egyptian princess.

It would appear highly probable that this variety is introduced by nature to facilitate recognition on the part of the birds, whose property might otherwise become hopelessly confused or lost. Certainly no two adjacent eggs are exactly alike, and the differences are usually so striking that a birdless ledge looks like an oölogical bouquet. These differences, moreover, are probably constant as between given birds. At least we found by experiment in 1907 that if a handsomely marked egg were removed, another of the same type might be expected in its place from one to three weeks later.

The peculiar shape of the egg, big at one end and little at the other, insures that the egg when disturbed shall roll in a small circle. In fact,



Taken on the S. E. Farallon *Photo by the Author*

A REFUGE IN A TROUBLED SEA

in the "fittest" specimens—fittest, that is, to survive—the little end marks the center of a circle whose radius is the longer axis of the egg. This provides for maintenance on narrow ledges under ordinary circumstances; but a sudden flight of the Murres is bound to precipitate some of the eggs, whatever their shape.

Taken in Washington *From a photograph, Copyright 1907, by W. L. Dawson*
THE AWKWARD SQUAD

Not only are bare rocks and ledges utilized, but eggs are deposited under projecting stones, in crannies, caves, or even old puffin burrows. When the birds nest in sheltered situations, one pays a fearful price for close acquaintance. A Murre rookery is not so bad where the purifying rains have access to it, but the stench of a protected cave is overpowering. Eggs are sometimes so encrusted with filth as to be immovable, and fledglings are born into conditions which would shame harpies.

Apropos of this indifference to sanitation may be mentioned the birds' preference for White-crested Cormorants, a favorably situated nest of the latter being almost sure to attract a small group of nesting Murres to its immediate vicinity. What compensating advantage this arrangement may afford them we do not know, for they are certainly doomed therein to a dismal martyrdom as targets for the Shag's impartial distribution of whitewash. Moreover, a hobbledehoy cormorant is likely to become very much excited over the advent of a birdman; whereupon, clamorous of escape, he goes stravaging over these mild-mannered satellites with exquisite ruthlessness. I have seen a group of Murres bowled over in this fashion like ten-pins, not once but three times, after which the birds chiefly aggrieved managed to extricate themselves from the tangle, and made off grumbling.

Murre chicks are not provided with abundant down, like baby puffins, or even guillemots. They are scantily supplied, instead, with a stubby

sort of down, white below, and black, varied by a sprinkling of stout white hairs, above,—all very short. They are therefore shivery little

Taken in Washington *From a photograph, Copyright 1907, by W. L. Dawson*

A NIAGARA OF MURRES

things, and require constant brooding. It is on this account that the anxious parents venture back, singly and by groups, as soon as the armed terror begins to retire. In preparing to alight, the bird's body is brought

into a vertical position, the feet are extended to the utmost to act as brakes, and the head is thrust forward as much as possible to guide these operations, which are imperfectly correlated at best. Occasionally, a bird fails to effect a landing with ease, or at least fears failure, whereupon it turns instantly and glides downward upon extended wing, preparatory to a new trial.

As we finally withdraw and the timorous ones come back, there is a ferment of readjustment on the ledge. Lost chicks pipe shrill inquiry of every bustling matron, and if mistaken, are received with spiteful jabs from bills as sharp as thorns. When, after much adversity, the right mother is found, the chick is promptly thrust between her legs, where the accommodations seem ridiculously inadequate. Fortunately, the chicks are not required to remain for long in this bedlam nursery. At an early age they are conducted—*carried* according to some authorities—to the water. Here they take up in high spirits the herculean task of conquering the mighty deep, and we know little more of their life history until they are ready to haul out again in the following, or perhaps in the next succeeding, spring.

The California Murre's notes consist chiefly of a mumbled and apologetic *ow ow*, or a louder *arry* of protest; but occasionally the birds explode in stentorous *kerawks*, absurdly out of character with their mild eyes. The name *arra*, which is applied to a closely related species in the North Pacific, is manifestly imitative.

Scattered colonies of Murres exist all along the coast-line as far south as Prince Island (off San Miguel), but their aggregate population is trifling in comparison with the northern colony, which for unknown generations has maintained itself upon the Farallons.

In the palmy days antecedent to the arrival of the gold seekers, these Farallon rookeries, or, more properly, *loomeries*, rivaled those of Alaska in importance. But the Argonauts brought keen appetites. Food was scarce in the early days, before agriculture had been developed. The presence of so much easy meat at the mouth of the Golden Gate was not likely to be overlooked. By 1850, the robbing of the Murre ledges had become systematic, and the Farallon Egg Company, the famous "egg trust," was formed for the purpose of supplying the San Francisco market. That the venture was a financial success there can be no doubt. Dr. Heermann, writing of the situation in the early Fifties, says, "The traffic in the eggs from this place to San Francisco and inland reaches the value annually of between one and two hundred thousand dollars".[1] According to another authority "more than five hundred thousand eggs were sold in less than two months in 1854—all collected in one limited portion of

[1] Rep. Pac. R. R. Surv., Vol. X., pt. IV., No. 2, pp. 75, 76.

South Farallon Island. And, 'in the opinion of the eggers, not more than one egg in six of those deposited on that island was gathered.'"

The history of the Farallon egg traffic deserves a volume, whereas we have only a few inches of space. It is difficult at this late day to form

Taken on the Southeast Farallon *Photo by the Author*

MURRES' EGGS

any adequate conception of the number of birds involved or of the ruthlessness displayed by the looters. Their motto was "all the traffic will bear," and the devil take the birds. Whereas the toll of 9 years had averaged twenty-five thousand dozen a year up to 1873, it fell away thereafter to fifteen thousand. By 1896, when Mr. Leverett M. Loomis visited the island, the picking had fallen to 7645 dozen. An alarm raised by this competent observer led to governmental interference, and in the following year all traffic in eggs was forbidden, and the islands were placed under the jurisdiction of the Lighthouse Board, a branch of the Treasury Department. In 1918, jurisdiction over the birds was transferred to the Department of Agriculture, and the policy of absolute protection will doubtless be maintained.

The infamous egg traffic is a thing of the past, but the Farallon rookeries have never recovered. Birds, which in fifty years had been called

upon to furnish the market some twelve million dozen fresh eggs, were not able, in spite of protection, to cope with new foes nor to stand up under the onslaughts of an ancient enemy, the sea gull, himself a notable beneficiary of protection.

When I visited the Southeast Farallon in 1911, for two weeks, I found about twenty thousand California Murres terrorized by about four thousand Western Gulls. Perhaps the gull has his uses, and he is a beauty; but so far as restoring the ancient prestige of the Murres is concerned—why, I would as soon undertake to raise chickens and skunks in the same enclosure. The case would not be so bad on an uninhabited island, for Murres en masse are proof against the assaults of gulls even. But the Southeast Farallon supports an increasing population of government employees, lighthouse keepers, weather men, wireless operators, etc.,

Taken on the S. E. Farallon *Photo by the Author*

A DIFFICULT PASSAGE

and these poor exiles have to stretch their legs once in a while. At the approach of a human the apprehensive Murres edge away, and the gulls swoop down to glean the uncovered eggs and to urge the Murres to further flight.

Our own mission, that of providing material for a habitat group in the California Academy of Sciences, although carefully safeguarded, was necessarily somewhat destructive. On the 20th of May, very early in the season, I ventured to disturb only one small colony of Murres, determined to ascertain the state of breeding. The birds, some 200 of them, moved off, hastily enough, and disclosed only 18 eggs. I had scarcely withdrawn when the gulls poured down upon the rocks and cleaned up the eggs in a trice. They seized them in their bills without difficulty, but let them fall again upon the rocks by way of getting at the contents. Some eggs were strong enough to resist this treatment, and such the gulls seized again and again and dropped from an increasing height, until the object was accomplished. Several gulls would lick up the contents of a single smashed egg; and although there was some squabbling, there was no attempt to escape with booty to some undisturbed spot, as would have been the case with a chunk of bread or meat.

The Murres are evidently very much attached to a given situation, once chosen. In no instance did I notice a diminution in numbers on the ledges most disturbed, but rather an increase. For instance, a certain flat-topped spur on the extreme west had been sacked just previous to our arrival. We visited it three times, uncovering, to our regret, over eighty eggs on the occasion of our last visit—yet this rock was swarming the day after, and the number of birds had doubled by the time we left. There was no doubt, either, that the birds on the disturbed ledges were increasingly apprehensive and wild. In going after the Brandt Cormorants under the umbrella tent we created such uneasiness in a certain populous colony (of say 200 pairs) which we had to pass, that we determined to sacrifice it and so rushed it. Ninety-seven eggs were exposed, all fresh or nearly so, and these we took. Twice thereafter we had occasion to pass the same way, and found it necessary to advance on the double quick to beat the gulls to the uncovered eggs. In fact the last time the gulls did get in first. Yet there were twice as many birds on the ledges the last time, and I am persuaded that our depredation made no more than a momentary difference. Moreover, and this point will bear emphasis—confidence undoubtedly increases with the advance of incubation. The Murre just emerging from a winter spent in the open ocean is a very skittish fowl. She is *thinking* of laying an egg; but Oh, Mercy, no, not now! When she is gravid with approaching maternity, she hates to move, but she will at whatever risk to self and posterity. Three weeks of brooding, however, will make her defiant of danger. In other colonies and upon more than one occasion I have stroked the sitting females with the hand.

To my great regret actual statistics are not available, but there is no doubt that the birds "haul out" on the ledges several days, perhaps ten

days, before oviposition. The egg, so immense for the size of the bird, is matured ashore. Indeed, the weight of the burden often renders the bird quite helpless and unable to fly. My heart ached for some of the mothers who, assaying flight, went bumping and floundering over the rocks instead; and I greatly fear that once dislodged the gravid female is never able to return with that burden. One caught by hand on level ground, where escape by flight was impossible, we dissected. The egg was placed in the oviduct *little end down* and must have been quite ready for extrusion. The pigment, although "wet," soon dried, and the egg cannot be told today from one taken from the ledge. But our chief curiosity was as to the development of the other ova. There was no sign whatever of activity, and the second in succession could not have been picked out from among her tiny sisters. Yet it is perfectly certain that such a succession had been designated, and that in the event of disaster to the first, another candidate would have been put upon the ways and rushed to completion within three or four weeks.

But lest we should overemphasize the destructiveness of the Gull, I will quote a page from field notes made on the spot: "California Murre, Farallon Ids., June 1, 1911. After all, the gulls do seem to have a certain respect for a Murre beak, especially when wielded in a righteous cause. The Murre colony, which occupies a certain outlier on the north side of the west end, is of the timid sort and as often as a human

Taken near Santa Barbara *Photo by the Author*

AN OIL-SOAKED MURRE

approaches but distantly on the trail, they begin to fly and climb. Today, instead of passing by, I sat down to watch with 8-power binoculars. An egg lay temptingly upon the lower ledge and a gull soon settled to investigate. He contemplated the prospect carefully and gave the egg a quick dab, which sent it rolling into a more convenient position. Then he struck the egg with his beak, broke it open where it lay, and proceeded to devour the delicious contents. Presently a Murre flew past and the gull flinched. Then the Murre returned, struck at him from behind, and put him to flight. Then she waddled to her own egg a foot or so away, and tucked it under her with show of satisfaction. The gull returned to a near-by perch but the sitting guillemot brandished her beak menacingly and the gull kept well out of reach of it. Other gulls were interested by this time and several tried a hand, knowing that the Murre was alone, but when it came to a showdown none dared to try conclusions. Then the first gull returned to his original feast, but another Murre came hurrying and tumbling down the ledge and made at the gull with such force that he quit instantly. The newcomer exhibited a proprietary interest in the broken egg, examined it carefully but did not touch it. Another Murre coming up to look was warned off with menacing gestures, but a third arriving at this juncture, gave the egg a hasty glance, seized it by a broken edge and tossed it up the ledge a foot or so. Then she waddled after it, tucked it under her and settled to the task of incubation as if nothing had gone wrong. There she sits even now, without giving evidence of discomfort. The first bird who examined the egg was evidently her mate, and when the gull returned once more he launched full at the robber and fairly knocked him off the ledge."

If, then, the testimony as to the destructiveness of the Western Gull seems not altogether overpowering, there can be no doubt of the consummate mischief wrought by the prevalence of crude oil. For two decades now it has been the practice of oil-carrying ships, "tankers," to heave to and clean out before entering the Golden Gate. To be sure the practice is illegal, but when does a great corporation stoop to regard so trifling a thing as the law? And if the necessity were explained to them, what average lot of sea-faring men would regard the welfare of a few bobbing sea-fowl? *Commerce* is master and the interests of men are subsidiary. Well; the Murres are nearly done for. The birds must swim, and they must appear for breath upon the surface of the water, where the loathsome crude oil attaches itself like pitch to their immaculate plumage. It smears the belly, it engages the flight-feathers, it impedes action. The frightened bird drags itself ashore to cleanse its plumage. But all it succeeds in doing is to involve the alimentary canal in the slimy infection. Purging and starvation follow, and the lawless tankers have nearly made a birdless waste of a region which was once a wonder of the scientific world.

Tufted Puffin

About ⅕ life size

Allan Brooks.

No. 298

Tufted Puffin

A. O. U. No. 12. **Lunda cirrhata** (Pallas).

Synonym.—Sea Parrot.

Description.—*Adult in breeding plumage:* Sides of head, narrowly, extreme forehead and chin white; the area continued backward over and behind eye in lengthened, undulating plume-tuft of close-set, silken feathers, changing posteriorly to deep straw-yellow; general color of remaining plumage black, bluish and glossy above, sooty brownish below, a little lighter and grayer on belly; wings and tail black, browning on inner webs; lining of wings smoky gray. Bill highly compressed, only one-third as wide as depth at base of nostril; outline of culmen doubly convex, the distal portion of upper mandible marked by two or three curved grooves convex backward; distal portion of bill vermilion, basal plates yellowish horn-color; iris horn-color to white; eye-ring vermilion; feet vermilion with black nails. *Adult after the breeding season:* Without crests; lighter, sooty-gray, on belly; white of face replaced by dusky. Bill smaller and dark-colored basally, seven deciduous plates having been shed; iris "pale blue"; feet "pale salmon flesh-color." *Immature:* Like adults in winter, but bill smaller and weaker, without grooves and saddled at base with soft dark skin. *Downy young:* Nearly uniform slaty black; first feathers on belly pure white. Bill black with outcropping of dull red near the middle. Length of adult: 381-406.4 (15.00-16.00); wing 196.9 (7.75); tail 69.9 (2.75); tarsus 33 (1.30); bill (chord of culmen) 61 (2.40); greatest depth of bill 48.3 (1.90).

Recognition Marks.—Appearing crow size by reason of relatively short tail; black plumage with white face and tufts and large vermilion bill unmistakable in breeding plumage; size and compressed shape of bill still distinctive in winter.

Nesting.—*Egg:* Single, white, often marked obscurely with pale brown and violet-gray; of variable shape, sometimes nearly equal-ended, sometimes pointed at one end, something like a Murre's; laid at end of burrow in earth-bank or, more rarely, in crevice of rock, or in shelter of brush. Av. size 72 x 49.2 (2.83 x 1.94); index 70. *Season:* April–July.

General Range.—Coasts and islands of the northern Pacific Ocean and Bering Sea with adjacent portions of the Arctic Ocean. Breeds from Cape Lisburne, Alaska, and Koliutschin Bay, Siberia, to the Pribilov, Aleutian, and Commander Islands, and south along the Pacific Coast of America to California. Ranges south in winter to Lower California.

Distribution in California.—Common resident upon the ocean, and breeding south upon suitable soil-topped islets to the northern islands of the Santa Barbara group. Abundant on the Farallons. Still breeds sparingly on Prince Islet and Anacapa Island, but is no longer found upon Santa Barbara Island, its southernmost recorded breeding station. Occurs a little further south in winter, but usually puts out to sea at that season.

Authorities.—**Newberry** (*Mormon cirrhatus*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 110 (Farallon Ids.); *Stejneger*, U. S. Nat. Mus., Bull. no. 29, 1885, p. 43, pls. 1, 2 (Commander Ids.; habits, bill structure and color, etc.); *W. E. Bryant*, Proc. Calif. Acad. Sci., ser. 2, i., 1888, p. 27 (Farallon Ids.; desc. habits, nest and eggs, etc.); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 18 (s. Calif. ids.; habits, occurrence, etc.).

The Tufted Puffin

Taken in Washington *Photo by Lynds Jones*

A QUAINT FOWL

TO THOSE who have been fortunate enough to visit some romantic isle off the North Pacific shore, these quaint fowls make an irresistible appeal of interest.[1] "Sea Parrots" and "Jew Ducks" the sailors call them; and we should all be inclined to poke fun at them for their outlandish head-gear if the situation were not so perfectly redeemed by the impeccable behavior of the birds. Masks are essentially ridiculous; but these "Masked Puffins" will not countenance laughter, and the grave solemnity of their regard brings you soon to respect, and then to admiration. For my own part, I confess a positive affection for these droll Quakers of the sea.

Puffins, in common with other species of the *Alcidæ*, spend the winter upon the ocean, and are seen near land only when the buffeting of some storm of unusual severity strews the sand with bodies of dead and wounded. As spring advances, these birds are provided with an extraordinary array of nuptial ornaments and appendages. Males and females alike receive, in place of dull black feathers, a white facial mask; and this is prolonged behind from either side into long, waving feather "horns" of a rich, deep straw-color. The eyelid becomes a brilliant red; and the great red beak, always stout and strongly compressed, is further augmented, basally, by a new set of horny plates of a dull oil-green or delicate horn-color, and these, in turn, exactly match the irides in tint. The feet also become bright vermilion, instead of a pale salmon.

Thus gaily caparisoned, the Tufted Puffins repair to the grassy, sloping hillsides of the rocky islets which constitute their summer homes, and proceed to renovate the old nesting burrows, or else dig new ones. They work intermittently at this. Stejneger, on the Commander Islands, noted that in the early days of the season the Puffins spent only one day ashore in alternation with two days at sea. It is probable, therefore, that the birds engage in the evolutions of courtship during these "sea-days," for I have never seen anything but the most circumspect behavior ashore.

It is difficult to exaggerate the gravity of these tranquil birds, absolutely silent on all occasions save when caught and harassed, when they may emit a low, raucous groan. They spend much time standing demurely at the entrances of their burrows, and the nearest approach to

[1]The substance of this account has already appeared as "Educational Leaflet No. 69," of The National Association of Audubon Societies (Bird Lore, Vol. XV., July-August, 1913, pp. 268-271), and the author is indebted both to Bird-Lore and the National Association for permission to reproduce.

levity one ever sees is the accidental shaking of the pendent plumes when the bird turns its head.

If a hillside colony is approached suddenly from shore, the standing population, presumably males, pitches downward to sea by a common impulse; while the nest occupants come shelling out by twos and threes and dozens, as one traverses the honeycombed earth. Once a-wing, the Puffin returns again and again to satisfy his curiosity, employing for the purpose great horizontal circles or ellipses, and slowing up a little at perigee. Or, if the nesting island be a small one, the Puffins will circle it a score of times. You know that the birds are justly apprehensive, but there is something so weird and funereal about the whole performance!

Taken on the S. E. Farallon *Photo by the Author*

FLAGGING OUR ATTENTION

Taken on the S. E. Farallon *Photo by the Author*

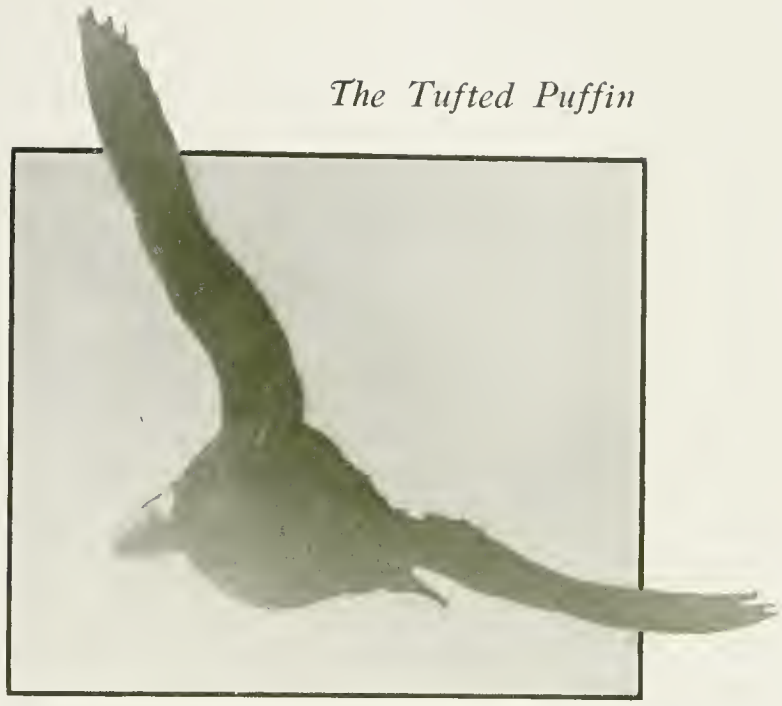
THE TUFTED COULTERNEB AT HOME

Taken on the S. E. Farallon *Photo by the Author*

TAKING OFF

Later the Puffins settle upon the surface of the water until the sea is black with them. Each bird dives, if only for a moment, upon the instant of alighting; and it may be that they find it difficult to effect this exchange of medium without a spill. Rising also requires an effort, desperate, if the sea is smooth, but easier in proportion to the increasing strength of the wind. Once the invader has left, or else secreted himself, the Puffins return rapidly to reclaim the cooling eggs, or to take up the sober vigil at the burrow's mouth. Each alights with uplifted wings held well back. The wings are also lifted from time to time as though to rest them, and they are brought into requisition as balancers whenever the bird attempts to walk. Be the going ever so easy, the Puffin shifts about as gingerly as the slack-wire performer.

A Puffin's bill is so remarkable a creation that a glance at its structure may not be out of place; though as to what may be the necessity of this powerful crushing organ we are frankly ignorant. The bird is not a shallow-water feeder, and so has no need to reduce bivalves. Moreover, in the breeding season it seems to subsist upon small fish, especially the sand launce (*Ammodytes personatus* Girard), which are easily taken by the slender-billed Murre. And, if the bill were designed to cope with some stubborn viand of the middle sea, why reduce its size in winter?



Taken on the S. E. Farallon *Photo by the Author*

A SHARP TURN

We do not know. But we do know that the Puffin's bill is wonderfully contrived of some eighteen plates (with underlying membranes), and that of these, sixteen, including "rosettes, lamellæ and selvedges," but chiefly the olive-green basal plates, are deciduous,—they fall away, that is, at the end of the breeding season. Their place is taken partly by underlying feathered tracts, and partly by an underlying horny plate of a deep brown color; and the basal dimensions of the bill are much reduced. Accompanying these changes is a disappearance of the white facial mask with its plumes, and the entire head becomes a uniform blackish color. The vermilion eyelids fade to a sickly salmon-color; and the irides, if we may trust scanty observation, become pale bluish.

A forty-five-degree slope of soil is the characteristic nesting-site of the Tufted Puffin. Here tunnels are driven at random to a depth of three or four feet, and so close together that once, on Erin, one of the Olympiades, by placing a foot in the entrance of a burrow and "fetching a compass," I was able to touch with the hands the entrances of twenty-five others, apparently occupied. This may have been an unusually populous section, but, if we reckoned at half that rate, an acre of ground would carry 2,700 burrows. Hard or rocky soil is not shunned in prosperous colonies, but many efforts here are baffled outright, and "prospects" are at least as numerous as occupied burrows. Elsewhere the top soil on precipitous clinging ledges may be utilized, or else crannies, and rock-hewn chambers. Upon the Farallon Islands, these birds have little opportunity for digging in the earth, and little necessity for providing fresh burrows, for crevices and cubby-holes abound. These are, for the most part, of an ample and substantial character, as though well maintained, and most of them have, doubtless, seen use measured by cycles rather than by generations. Many eggs, and sitting birds as well, are visible from the outside; while some of the nesting-sites are nothing more than the innermost recesses of niches and caves occupied by the Murres. On the Farallons, also, there is a fierce, albeit silent, competition between these silent

Taken on the S. E. Farallon *Photo by the Author*

THE LANDING

birds and the rabbits which swarm over the rocks. I have seen impulsive bunnies which, fleeing from fancied danger and taking refuge in the first burrow at hand, emerged more hastily than they went in. The Tufted Puffin is a dangerous as well as a determined foe, and a bite from that rugged beak will cut to the bone.

Although equipped with so formidable a weapon, the birds, in digging their burrows, appear to depend upon their feet. These are provided with nails as sharp as tacks, and the "finish" of the nesting-chamber usually exhibits a criss-cross pattern of fine lines. Upon a rocky islet known on the charts as "Off Trinidad Rock" I found the Puffins nesting in a conglomerate rock in tunnels from three to six feet long. The conglomerate must have been softer where not exposed to the air, but upon the exposed surfaces near the orifice the cement had hardened, so that I could scarcely dislodge a single pebble with my steel-shod pike.

Long grass and dense thickets, as of salal, salmon-berry bushes, or dwarf spruce, occasionally afford refuge to birds hard-pressed for room. Here the Puffin, starting from some exposed edge, drives a tunnel through the matted vegetation and deposits its egg upon the surface of the ground, in shade almost as intense as that afforded by the earth itself.

Only one egg is laid, dull white as to hue, with faint vermiculations of brown and purplish. Because the nest-lining is of the scantiest, a few salal leaves or bits of grass, the egg is often so soiled by contact with the earth as to pass for dingy brown.

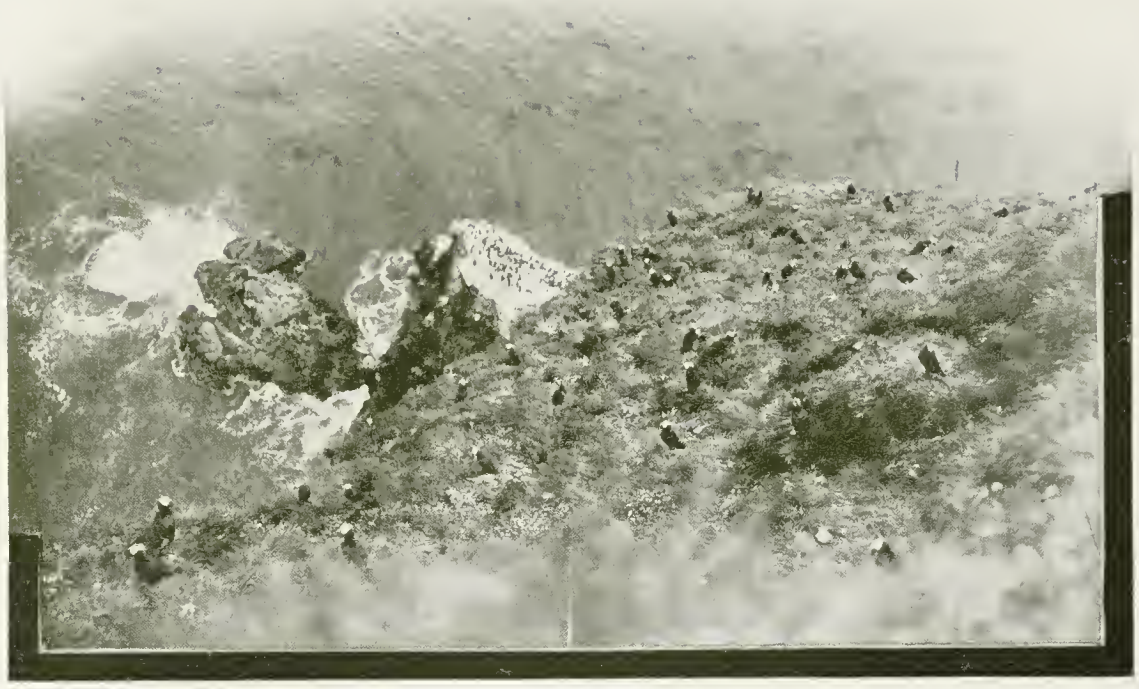
The baby Puffin is your true *Puffin*, and it is undoubtedly he who gave this trivial name to the group. He is, indeed, a mere puff-ball of down, for he is densely covered at birth with down at least an inch long and you could blow him away (Pouf!) if he were not so fat and anchored in a hole. The down is of a uniform dull slaty black, and the only touch of color about this infant pin-cushion is a showing of dull red near the middle of the otherwise black bill.

Taken on the S. E. Farallon *Photo by the Author*

HIS HONOR, THE TUFTED PUFFIN

In assuming the first plumage, the juvenal shows many of the characters of the winter adult, but it is whitish or light gray below. With the approach of its first spring, it takes on first the feather tufts, of a dull brownish hue, then the white facial mask, with corresponding bill changes; but whether or not the yearling bird breeds, is an open question. The non-breeding birds remain at sea, where they are nearly as exempt from scrutiny as are baby sea-serpents.

The Tufted Puffin enjoys the widest breeding range of any bird in the North Pacific, except the Pigeon Guillemot; and although not so thoroughly distributed as that species, it is undoubtedly far more abun-



Taken in Washington *Photo by the Author*

A PUFFIN BANK, FROM ABOVE

dant. On the American side, it breeds as far south as the Santa Barbara Islands, and as far north as Cape Lisburne, in northwest Alaska. It is, however, of comparatively rare occurrence in Arctic waters. On the Asiatic side, its breeding range extends as far south as Japan; while its center of abundance is generally conceded to be the Aleutian Islands. Deposition of eggs occurs as early as May 1st, in southern California, and as late as August 1st, in the northern latitudes; but fresh eggs may also be found somewhere from June 1st to June 20th at any given point in its breeding range. Thus, on certain islets off the west coast of Washington, I have found the Puffins punctual to a day, and depositions occurring with practical uniformity; whereas, on the Farallons, 1911, there was a steady increase in numbers from the 1st to the 28th of May, with a few still to be heard from on June 3rd. The winter range of this species comprises the open ocean, and the birds are occasionally driven shoreward along the Aleutian chain and the coasts of approximate latitudes.

From time immemorial, the natives of the North Pacific islands have placed large dependence upon the Puffins, Tufted and Horned, to supply both food and clothing. Advantage is taken of the bird's inability to alter quickly its course of flight—your Puffin is no dodger—and large

Tufted Puffins and Surf

From a photograph by the Author

Taken on the Southeast Farallon

numbers are caught annually by means of small nets mounted on poles,—a sort of glorified butterfly hunt. The Puffin meat is not distasteful, as sea-birds go, although white men do not care for it. More important to the native Aleutian is the uniform tough skin, which goes into the making of parkas, the famed feather-coats of the North. These garments, each requiring the use of from forty-five to fifty Puffin skins, are made up feather-side in, and are nearly impervious to cold.

With the natives we shall, of course, have to be very patient until such time as the channels of distribution have been perfected, so that they they may have Gloucester codfish, Yakima potatoes, and Ventura beans for food, instead of the flesh of "Toporki" (the Commander Island name for Puffin), and garments made of good Irish wool, instead of flimsy bird-skins. With the fishermen (imported) we shall have to be very firm, reminding them that Uncle Sam is willing to subscribe liberally for fish spawn, to fill the ocean if need be, so that there may be indeed food for all, birds and humans; but very unwilling to see his guests assault the ancient rights of his feathered wards.

For ourselves, we need no economic excuse to cloak our interest in these quaint old-men-of-the-sea, the Tufted Puffins. Remote, unobtrusive though they be, they belong to us to study, to protect (as need arises), to enjoy. A visit paid to one of their breeding haunts is like a trip to fairyland, a real and tangible bit of romance. Such a privilege,

Taken off the coast of Washington *Photo by the Author*

THE EXCURSION

PROBABLY THESE BIRDS ARE FOLLOWING THE MOVEMENT OF A SCHOOL OF FISH. THEY ARE NOT MIGRANTS, SINCE IT IS THE BREEDING SEASON, JUNE

properly exercised, is the inherent right of every American citizen, and should be safeguarded to our children for all time. The maintenance in full measure of these and other sea-fowl is so obvious an esthetic advantage to the race that no taint of commercialism ought to enter in, at any point, upon our consideration of them.

No. 299

Horned Puffin

A. O. U. No. 14. **Fratercula corniculata** (Naumann).

Description.—*Adult in breeding plumage:* Roughly, black-and-white. Crown, narrowing on forehead, clear hair-brown; sides of head, broadly, white, shading to brownish gray on sides of lower jaw and in post-ocular furrow; remaining upperparts and connected collar, passing forward to chin, glossy bluish black to sooty black; lining of wings smoky brown; a few dark feathers on flanks; remaining underparts pure white. Bill exceedingly compressed, one-fourth as wide as high at base of nostril; crossed near tip by two crescentic grooves convex forward; toothed on both mandibles, and bright vermilion throughout; rosette at angle of mouth bright orange; edges of eyelids red; fleshy excrescences proceeding from eyelid over and behind eye, the "horns," dull blue; irides brown; feet orange-red with duller soles. *Adult in winter:* Size of bill greatly reduced by shedding of seven horny plates; eye processes wanting; eyelids and rosettes paler; feet yellow. Length of adult 355.6-406.4 (14.00-16.00); wing 190.5-209.55 (7.50-8.25); tail 70 (2.756); bill (chord of culmen) 53 (2.09); maximum depth 44 (1.73); tarsus 31 (1.22).

Recognition Marks.—Crow size; black above, white below, with white face; head pattern distinctive even in winter, when remarkable bill is greatly reduced.

Nesting.—Does not breed in California. *Egg:* Single, ovate; dull white, often very faintly and finely marked with pale violet-gray and dull olive. Indistinguishable in size from those of *Lunda cirrhata*. *Season:* June–July 10.

General Range.—Coasts and islands of Bering Sea and contiguous portions of the Arctic and north Pacific Oceans; breeding from Cape Lisburne, Alaska, and Koliutschin Bay, Siberia, south to the Commander Islands, and east along the Aleutians to Glacier Bay, Alaska, and south, sparingly, to Forrester Island. In winter south to Kuril Islands and Queen Charlotte Islands; less frequently to coast of California.

Occurrence in California.—Of rare occurrence on the coast, at least as far south as Monterey. Probably fairly common on the open ocean.

Authorities.—**Bishop** (*Fratercula corniculata*), Condor, vol. xvi., 1914, p. 204 (Pacific Grove, Feb. 17, 1914, 1 spec.); *Bent*, U. S. Nat. Mus., Bull. no. 107, 1919, p. 97 (life hist.; desc. nest and eggs).

THREE "records" would give this bird a very slender claim upon our attention, were it not for the suspicion that the Horned Puffin is of regular occurrence off our coasts in winter. The Smith records, especially, would go to show that Horned Puffins may mingle at sea with our own Tufted Puffins, in the proportion of one to six. We cannot hope, however, for any first-hand knowledge beyond that afforded by a battered carcass tossed up from time to time by a repentant sea.

The species nests as far south as Forrester Island, Lat. 55° North, although at that extreme of its range the Tufted Puffin outnumbers it, according to Professor Heath,[1] some thirty to one. The northernmost colony reported on appears to be that on Chamisso Island, of which Dr. Grinnell has left the following account:[1] "On July 9, '99, I spent the afternoon and night on Chamisso Island. On this island and a smaller detached one bearing northwest from it, the Horned Puffins were breeding in immense numbers. Their nest-burrows were dug in the earth on top of the islands, principally on the verge of the bluffs. These burrows were from one to three feet in length, with an enlarged nest cavity at the end. The eggs generally lay on the bare ground, but there was often a slight collection of grasses between it and the earth. The parent bird was frequently found on the nest and would sometimes offer courageous resistance to being dragged forth, inflicting severe nips with its powerful mandibles. Where there were no rock slides on the side of the island, natural crevices and holes among the fallen boulders were taken advantage of for nesting sites. In such places eggs were to be found from the surf to the top of the island, and by crawling amongst the boulders many eggs were discovered, but often in such narrow crevices that they could not be reached. The birds usually flushed from their nesting places before the collector reached them, being probably warned by the vibration of footsteps on the rocks, which I noticed to be quite perceptible when one was in a narrow chasm. The eggs laid in these rocky niches were usually provided with a scanty bed of dry grasses. All the eggs secured were fresh and proved more palatable for the table than murres' eggs. In a series of fifty eggs of the Horned Puffin, there is considerable variation in size and markings. In the large majority the ground color is pure white, but in four eggs it is cream-buff. All the eggs exhibit shell markings, spots, blotches and in a few cases, scrawls of dull lavender. Five of the eggs one would consider at first sight immaculate, but close scrutiny discloses the shell-markings, though they are extremely pale and few in number. Eight eggs in the series have outer spots and fine dashes of isabella color, and one of them is very closely covered by scrawls and spots, with two large blotches of the same color."

It is this species and not *Lunda cirrhata* which has given rise to the

[1] The Condor, Vol. XVII., Jan. 1915.
[2] Pacific Coast Avifauna, No. 1, 1900, p. 6.

tradition of boisterous misconduct. Says Mr. H. W. Elliott, in writing of the birds on the Pribilovs:[1] "It is the only bird on these islands which seems to quarrel for ever and ever with its mate. The hollow reverberations of its anger, scolding and vituperation from the nuptial chambers, are the most characteristic sounds, and indeed the only ones that come from the recesses of the rocks. No sympathy need be expended on the female. She is just as big and just as violent as her lord and master."

No. 300

Horn-billed Puffin

A. O. U. No. 15. **Cerorhinca monocerata** (Pallas).

Synonyms.—Unicorn Puffin. Horn-billed Auklet. "Rhino."

Description.—*Adults in breeding plumage:* Upperparts sooty black or glossy brownish black; color shading insensibly on sides of head, quickly on sides of neck and breast, into dull sooty gray or smoke-gray of throat, chest, sides, flanks, and wing-linings; remaining underparts white, or white faintly washed with smoke-gray; shafts of remiges whitish basally, in proportions decreasing from outermost; a maxillary and a post-ocular stripe of lengthened, lancelinear, white feathers; bill orange, duller along tomia, black on culmen, a horny projection above nostril at base of bill about .60 (mm 15.2) high (from nostril); a small deciduous plate at base of under mandible; feet and legs yellow above, black below; irides hazel. *Adults in winter:* Without horny appendage and inframandibular plate; irides white. *Young of the year:* Bill much smaller than in adult; no white stripes on head; general plumage much as in adult in winter, but browner, and white of underparts washed or tipped with sooty-gray. *Nestlings* are covered with heavy slaty black down. Length of adult: 330.2-393.7 (13.00-15.50); average of 10 Monterey specimens: length 370.5 (14.59); wing 182.7 (7.19); tail 59.2 (2.33); culmen from base of horn 26.2 (1.03); depth of bill at angle of gonys 15.5 (.61); tarsus 29.4 (1.16).

Recognition Marks.—Teal size; horn (in breeding season), and white stripes of head distinctive in adult; dull plumage with size not likely to be confused in juvenile.

Nesting.—Does not breed in California. *Nest:* At end of burrow driven 5 to 15 feet in perpendicular or sloping sea-wall. *Egg:* Single, ovate, ovate-pyriform, or elliptical ovate; dull white, immaculate, or more commonly exhibiting traces of lavender, violet, or deep brown, in spots or scrawls. Av. size 68.6 x 45.7 (2.70 x 1.80). *Season:* May 1–June 10.

General Range.—Coasts and islands on both sides of the northern Pacific Ocean, breeding upon (at least) the Kuril Islands, and from Sitka, Alaska, south to Washington (Smith's Island, Protection Island, and Destruction Island). In winter south to Lower California and northern Japan.

Occurrence in California.—Common resident in the ocean in winter, especially about the Santa Barbara Islands. [Stated by Heermann to have been found by him

[1] Report on the Seal Islands of Alaska, 1880.

in June breeding upon the Farallon Islands. It is significant, however, that Heermann did *not* find the Cassin Auklet (*Ptychoramphus aleuticus*), which now breeds upon the Farallons by thousands, but he expressly says of the latter, "They abound on these islands during the winter, but on my return in spring they had already left to pass their summer in more northern climes"!]

Authorities.—Cassin (*Cerorhina monocerata*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 905 ("California"); *Henshaw*, Auk, vol. ii., 1885, p. 387 (Santa Barbara and San Diego, winter; as to molting parts of bill); *Grinnell*, Bull. Cooper Orn. Club, vol. i., 1899, p. 18 (Catalina Id.; habits, food); *Howell*, Pac. Coast Avifauna, no. 12, 1917, p. 19 (s. Calif. ids.; occurrence, etc.).

WE SHALL never be done, I suppose, quarreling with the bird names which an uncritical—or over-imaginative—generation has left us. *Cerorhinca monocerata* has been known in ornithological literature as the "Rhinoceros Auklet." The bird, however, is not an "auklet" at all, but a puffin (as its egg clearly shows); while the name "Rhinoceros" based upon the possession of a deciduous horny knob on the beak is, to say the least, a rather broad joke. The name Horned Puffin would have been more appropriate, but some other chap with a superheated imagination got ahead of us by tacking that name upon *Fratercula corniculata*, because, forsooth, it has a *fleshy* protuberance upon the upper eyelid! We shall have to fall back then upon the exactly descriptive designation "Horn-billed Puffin," and so have the terrors of nominal similarity, rather than

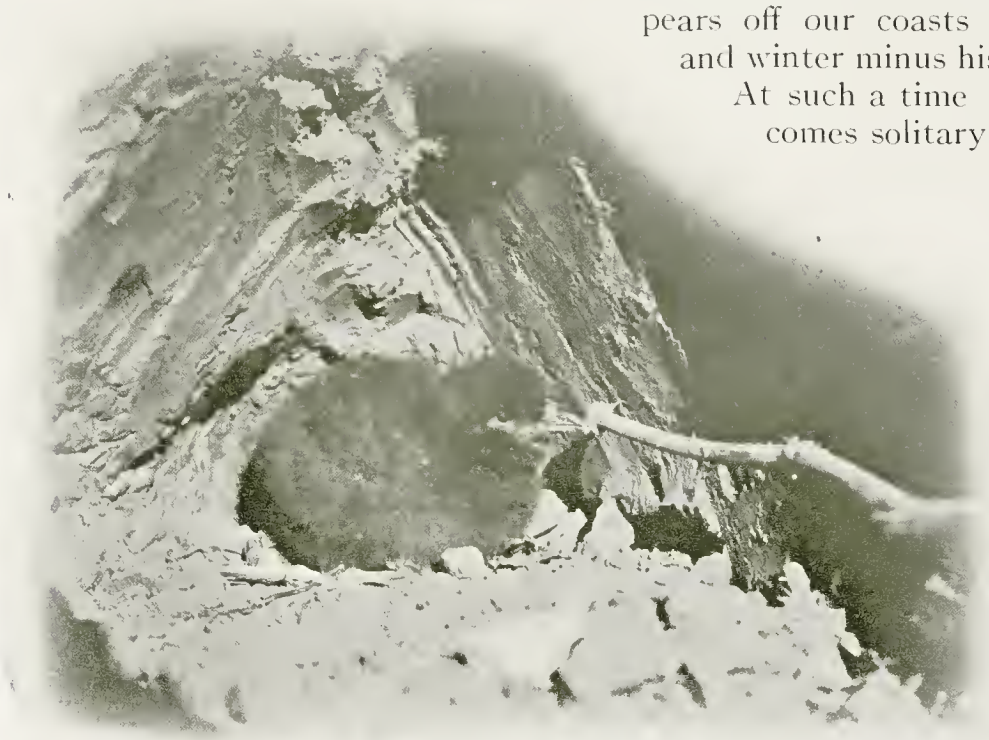
Taken on Santa Cruz Island *Photo by the Author*

A WILY SPORTSMAN

THE BIRD IS IN WINTER PLUMAGE: NOTE ABSENCE OF HORN AT THIS SEASON

consent to the shameless imbecility of "Rhinoceros Auklet." Or if, again, the urge of brevity shall force a compromise, we may suffer the name "Rhino," which actually obtains widely, to pass muster as the colloquial designation of this unique and quite unmistakable species.

Whatever may be the fashion of midsummer, the Rhino appears off our coasts in fall and winter minus his horn. At such a time he becomes solitary in his



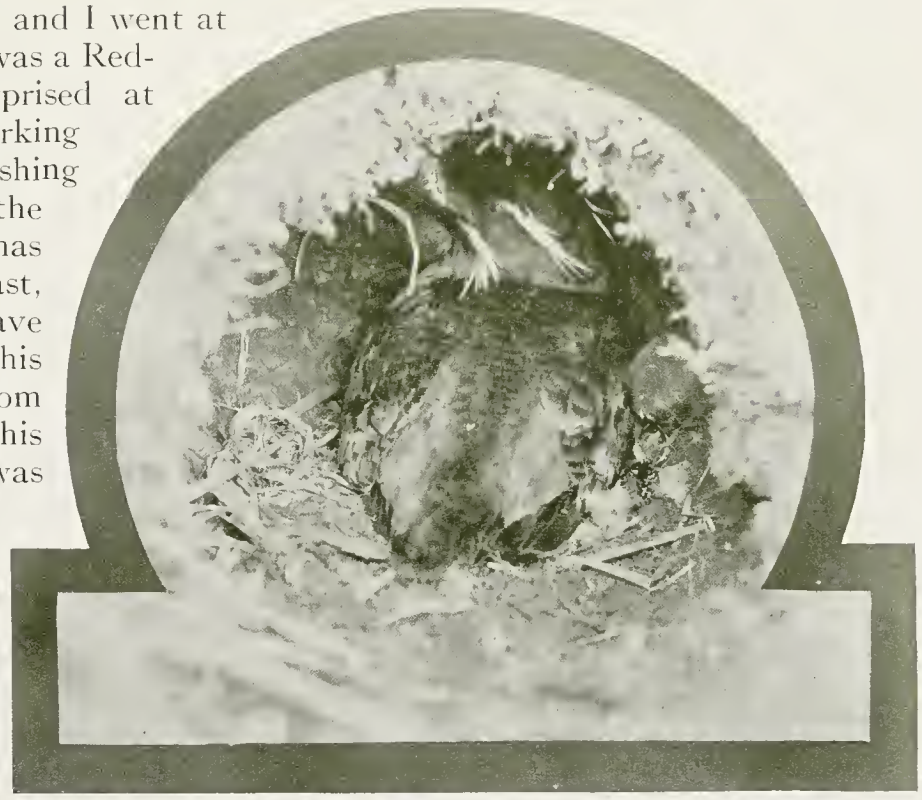
Taken on Destruction Island *Photo by the Author*

A BLACK PINCUSHION
CHICK OF HORN-BILLED PUFFIN

habits and hunts well off-shore; or else haunts the rock-bound coasts of the Santa Barbara Islands. One we observed in mid-spring, April 14-17, 1915, on Santa Cruz Island, which showed a slight tumescence at the beak, suggestive of the approaching horn, but no appearance of the nuptial plumes upon the sides of the head. This bird hunted anywhere from the water's edge to a point a hundred yards off-shore. He was a stolid-looking creature, as motionless as a floating chip, when on the surface; but once below, he displayed the resolute energy of a torpedo. Once, he got caught in a breaking roller, and actually protruded for an instant from the wave's green wall, but, somehow, he managed to turn tail to the air and to swim back out of sight. His work took him very close to the rocks, however, and at a point where the waves swept without breaking squarely, we

watched him in a cauldron of contending waters which threatened to dismember him. Upon reappearing at the surface, the bird first wagged his tail sidewise, to remove superfluous moisture, apparently, then sat rigidly with the foreparts somewhat depressed in the water, the head and bill horizontal, and the points of the wings and the tail sticking up at an angle. If the fishing was good, these rest periods lasted only two or three seconds, while the submergence lasted from twenty to thirty seconds in each case. In diving the bird pitched forward and kicked with the feet, which had remained, meanwhile, at right angles to the body, and at the same time he opened the wings part way, so as to catch the water with the first stroke. When pursued by the bird, its prey, apparently a tiny fish of some sort, would almost invariably escape by rising. It was almost as invariably seized at the surface, whereupon the bird, without pausing for breath, instantly retired, turtle-fashion, to the depths. In this way the puffin might break water accidentally half a dozen times before it was ready to come up for its rest interval.

"Santa Cruz Id., April 17, 1915. Ha! There is no sport like that of the bird photographer after all! By way of compensation for unrewarded efforts through a dull morning, the sun burned off the fog just after lunch and I went at it again. My first victim was a Red-breasted Merganser, surprised at close quarters as he was working at the very edge of the smashing waves. The next was the Horn-billed Puffin, who has adopted this stretch of coast, and whose fortunes I have been permitted to follow this week. He was in sight from camp when I started out this afternoon, but either he was wary or else the tide wasn't yet to his liking, for he lay offshore some twenty fathoms and would not dive. Finally, in despair, I ostentatiously quitted my hiding place on the beach, returned to camp, and then took a sneak over the hill



Taken on Destruction Island, off the coast of Washington *Photo by the Author*
A SULKY HEN

in the shelter of the oaks, with a view to meeting the diving beau up coast. It worked to a nicety. The Diver pulled in and moved along a hundred yards to good country

Taken on Destruction Island
Photo by the Author

GLOVES ARE RECOMMENDED

he knew (though it took him half an hour to do it) and then peeled off his coat, at it were, and dived in. I surprised him at close quarters and got in an exposure, No. 1. The Rhino was too dignified to scamper, but he quickly edged away and moved up coast fifty yards and began to work close in. Again I surprised him and this time he stood his ground. It was royal sport. I was simply trembling with excitement like a bird-dog whose master is about to shoot. Where in the boiling cauldron would he come up next? Here perhaps; no, there! And down he goes before I can swing on him. Once he came up within fifteen feet, but I missed him. Twice I got him fair as close as thirty feet, all sparkling with water and bristling with alertness. He gave me several square chances, and then edged off along the shore where the water was fairly seething, and I marveled that anything could live. Twice he came up within two feet of the rocks, and once he actually stranded on a ledge, not attempting to move until the water eased him. I followed again, and I give you but a faint idea of the thrill and glory of it all when I tell you that my legs were nearly too weak to carry me. Seven shots at a Horn-billed Puffin at work in the churning sea! And the shore-work was rough too. Once I took too big a chance,—the camera was heavy, and my foot slipped, with a nasty smash in prospect, throwing my whole weight unexpectedly on one hand. The thumb went over backward, but it held long enough to save my footing, and once recovered, I dashed on after

that blessed bird. Not much ornithology to learn that way, perhaps, but I came to regard that Rhino as a brother; and I think the bird's heart was touched, for when he found that I would not follow his last evasion, he returned, presently, and gave me a deliberate chance, well within range."

Of the nesting of this sportive bird, it is scarcely fair for a Californian to speak, since its southernmost breeding station is Destruction Island, off the coast of Washington. But three summer visits paid to that romantic isle make some mention upon the author's part imperative.

Destruction Island, unlike most of the Olympiades, is not a stubborn remnant of some ancient rocky headland, but is rather a detached fragment of a valley floor,—in fact, a chip of the prosy mainland block four miles distant. It owes its preservation to a series of outlying reefs, grim bones from which the sea has stripped the flesh, and is itself a phase of dissolution. On this account its top is level, while its sides are fresh-cut and steep, although a brave luxuriance of vegetation serves to retard, as it disguises, the progress of decay.

About this island of sixty acres gather a few memories of the human, a tragedy of discovery, a shipwreck or two, and latterly the brave, lonesome life of light-keepers. But these are matters of two centuries, a mere yesterday. Drop down behind the sea-wall out of sight of the friendly lighthouse, and you could forget that men ever lived. Nor would you suspect what is the real interest, the historically continuous interest of this post—by day. It is the home of ten thousand Horn-billed Puffins (*Cerorhinca monocerata*). They are the cave-dwellers of Destruction.

Late in April the Puffins, stirred by a common impulse, muster from the wide seas and move upon Destruction by night. If there has been any scouting or premature development work, it has been carried on by night only and has escaped observation. In fact, it is a point of honor among the Rhinos never to appear in the vicinity of the great rookery—or puffinery—by day.

At the tribal home-coming, the keepers tell us, there is a great hubbub. If the location be a brushy hillside, the birds upon arrival crash into the bushes like meteors and take chances of a braining. Upon the ground, they first argue with old neighbors about boundaries. If growls and barks and parrot-like shrieks mean anything, there are some differences of opinion discovered. Perhaps also the details of matrimony have not all been arranged, and there is much screaming avowal.

Gradually, however, order emerges from chaos, and the birds set to work with a will renovating the old home, or driving new tunnels in the loam, sand, clay, or even hardpan. The burrows are usually five to eight feet in length and about five inches in diameter, terminating in a dome-shaped chamber a foot or more across and seven or eight inches high.

Each tunnel has a spur or blind alley which, presumably, is occupied by the male during the honeymoon. For lining, the nuptial chamber boasts nothing more pretentious than a few dead salal leaves and a handful of dried grasses.

When the single egg is laid the male bird leaves his mate and forages at sea, accomplishing to this end almost incredible journeys—sixty miles, say—to get to a favorite feeding ground, and as much to return, after nightfall, laden with sand launces, or their partially digested equivalent. There is a noisy exchange between partners at ten p.m., and another just before daybreak, but whether the female invariably takes the night shift at sea, or whether there is a fairer division, turn and turn about, we do not yet know. A Horn-bill hen, discovered upon her nest, has all the defiant virtue of her sex and calling. The one figured on p. 1521 was sitting on nothing at all, not even a clam-shell; but neither is that original with the Rhino. She is quite ready to peck, too, and a glove is to be recommended for these psychological studies. When given her freedom, the Horn-bill invariably pitches headlong down the declivity, barely clearing the vegetation, until she reaches the level of the water, whereupon she flies away with a swift, even stroke, about a foot above the surface, until lost to sight.

In June the chick hatches, a child of night; and he is appropriately clad in a suit of slaty black down. He has no desire to see the light, least of all as prepared for him by pick and shovel. He feels quite ill at ease when exposed, and spends his entire time shifting about restlessly in the end of a burrow remaining to him, and searching in his soul why he may not find greater privacy.

The children of the night-shift are all alike in this, that they love darkness rather than light. That this was not always true of the Horn-billed Puffin we have curious evidence in the coloring of the egg. Viewed in the large, the purpose of pigmentation is protective. The egg of the gull, exposed to the full glare of day, is dark-colored and so splashed and blotched with brownish blacks that it blends in admirably with its surroundings of dead grasses and dun rocks, and is thus lost to hostile view. But when a species begins to forsake the open and there is no longer need of heavy pigmentation, the egg tends to revert to primitive white; that is, to unpigmented calcium carbonate. Now in the case of the Horn-billed Puffin's egg, as in that of all other Puffins, we find traces of an ancient color-pattern, undoubtedly heavy, still persisting in faint lines of umber and in subdued shell-markings or under-tints of lavender and lilac. These to the oölogist are eloquent of a time ages ago before the race went moon-mad.

No. 301

Little Brown Crane

A. O. U. No. 205. **Grus canadensis canadensis** (Linnæus).

Synonyms.—Northern Brown Crane. Little Sandhill Crane. Canadian Crane.

Description.—*Adult:* General plumage slaty gray (unmixed in the rarely-seen, fully-mature birds, but usually) more or less washed especially on back and scapulars, with ochraceous or rusty,—this rusty sometimes abruptly confined to scattered single feathers; throat and sides of head paling to whitish; alula and wing-quills blackish, the shafts of primaries white; top of head to below eye bare, dull red, the skin minutely warty, and with some short, bristly black hairs. Bill, feet and legs black. *Immature:* Head entirely or decreasingly feathered; plumage heavily washed with brownish and overlaid or invaded by rusty, especially above,—this color clear but evanescent on crown, most persistent on wing-coverts. Length of adult about 889 (35.00); wing 482.6 (19.00); tail 190.5 (7.50); bill 96 (3.78); depth at nostril (rear) 18.8 (.74); tarsus 194 (7.64); middle toe and claw 85.1 (3.35).

Recognition Marks.—Eagle size; slaty gray or brownish color; elongated proportions of bill, neck, and tarsus; smaller than next form.

Nesting.—Does not breed in California. *Nest:* On drier portion of grassy flat, a shallow platform of weed-stems and dried grasses. *Eggs:* 2: light greenish clay-color to light olive-brown or avellaneous, marked rather obscurely with dull reddish brown and brownish drab. Av. size 94 x 61 (3.70 x 2.40). *Season:* c. June 1st.

Range of *Grus canadensis.*—North America, breeding from Alaska and Arctic islands south to Florida and Louisiana; wintering south to Mexico.

Range of *G. c. canadensis.*—Breeds from northern Alaska and the Arctic coast south to the mouth of the Yukon, southern Mackenzie, and central Keewatin (but southern limits imperfectly defined as between *canadensis* and *mexicanus*). Migrates chiefly through the interior, and winters south to California, Texas, and Jalisco.

Occurrence in California.—Imperfectly distinguished from that of following form. Probably much the commoner bird during migrations, practically throughout the State. Winters sparingly in the San Joaquin Valley.

Authorities.—**A. K. Fisher** (*Grus canadensis*), N. Amer. Fauna, no. 7, 1893, p. 20 (Ash Meadows, Nevada-California boundary line); *Grinnell*, Condor, vol. xi., 1909, p. 128 (occurrence in s. Calif.); *J. Mailliard*, Condor, vol. xiii., 1911, p. 50 (Los Baños; measurements); *Cooke*, U. S. Dept. Agric., Bull. no. 128, 1914, p. 7, map (distr. and migr.); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 273 (desc. occur., habits).

SPRINGTIME in California is like the gradual unfolding of a flower, a little more perfect each day. In the East it is either a gift or a conquest, a tropical favor or a disheveled bouquet, a something to be striven for, now flung in lush promise at the feet of expectant humanity, or suddenly snatched away again, according as Boreas or Flora wins each swiftly succeeding bout. In the West it is not so; and there be those of us who

sigh at times amid the fragrant and inevitable orange-blossoms for the *Sturm und Drang* of a grosser passion. To such comes the multitudinous croak of the passing cranes as a blessed relief. "*Krr—kr—r, kr—r, kr—oo, Kr—r, kr—r, kr—r, kr—oo,*" shout these winged barbarians as their cohorts press northward. "Come with us," they challenge, "flee these soft enticements of the Southland. We will show you how to mock the gnashing teeth of retreating winter. Come where bitter winds provoke hot blood. Come where the owl and the lemming hold sway over vast tundras. Come where Aurora paints the sky with unimaginable splendors. Come—O ye gods!—where man or bird may breathe without the rebuke of jostling elbows." *Kr—r, kr—r, kr—r, kr—r—oo.* Oo aye! It is harsh, discordant, and all that. But it comes with the authority of bagpipes, or bugles. Our herts are wi' ye, birdies!

It is only within comparatively recent years that the Little Brown Crane has emerged to consciousness as the breeding species of Alaska and the British possessions, as contrasted with the less abundant and more widely scattered Sandhill Crane of the northern states and a little beyond. In the West, during migrations and in winter, *canadensis* probably outnumbers the larger species three to one, and in California ten to one. Early references to two species are hopelessly involved, and even to this day there are few, however expert, who will claim to be able to distinguish *canadensis* from *mexicanus* afield. As to the past, we can only surmise that any unseasonable slaughter has been at the expense of resident *mexicanus*, while market-hunting in season has been chiefly concerned with *canadensis*.

The Little Brown Crane still passes in considerable numbers en route to the unsettled country adjacent to the head of the Gulf of California, or it deploys over the cattle ranges of western Kern, Kings, and Fresno counties. Comparatively little is known of their behavior, even in winter, for the birds are precisely where men are not—if there are any such places left—and the lines of demarcation between cranes and men are no longer measured by the range of shot gun but by the range of high power rifles. Thus does man's advancement in the mechanical arts make for brotherhood and contentment among the children of nature. *Aber nit.*

No. 301a Sandhill Crane

A. O. U. No. 206. **Grus canadensis mexicanus** (Müller).

Synonyms.—Southern Sandhill Crane. Brown Crane. Mexican Brown Crane.

Description.—Exactly like preceding species but larger. Length up to 1143 (45.00); wing 558.8 (22.00); tail 203.2 (8.00); bill 139.7 (5.50); depth at base 26.7 (1.05); tarsus 260.6 (10.25); middle toe and claw 101.6 (4.00).

Recognition Marks.—Eagle size; slaty gray or brownish color; crane proportions, distinctive from all except the Great Blue Heron, from which it is further distinguished by more uniform coloration and absence of specially developed feathers, and by its much smaller *black* beak. The tertials of this bird, moreover, are lengthened and luxuriant, making a conspicuous quasi-train.

Nesting.— *Nest:* Of sticks, roots, grass, and trash, built up in shallow water or in open situation. *Eggs:* 2; light olive-brown, or deep reddish olive-buff, marked more or less obscurely with dull reddish brown (army brown to warm sepia) and brownish drab. Av. size 99.1 x 63.5 (3.90 x 2.50). *Season:* February–May, according to latitude; one brood.

Range of *G. c. mexicanus.*—Breeds from south-central British Columbia, Saskatchewan, Manitoba and (formerly at least) Ontario, south to California, Arizona, Colorado, Nebraska, and Ohio; also in Louisiana and Florida, where resident. Winters from California, Arizona, Texas, and Louisiana south over Mexico.

Occurrence in California.—Of limited occurrence in summer, and probably breeding in northern, especially northeastern portion of State. Is seen also about certain Sierran meadows at high levels. Has been seen in summer near Tulare Lake (Goldman), but there is no recent account of nesting within the limits of the State. Sparingly resident in winter at least in the San Joaquin Valley.

Authorities.—Gambel (*Grus mexicana*), Jour. Acad. Nat. Sci. Phila., ser. 2, i., 1849, p. 221 (California); *Coues*, Birds of the Northwest, 1874, p. 534 (eggs from Ft. Crook, Calif.); *Cooke*, U. S. Dept. Agric., Bull no. 128, 1914, p. 10, map (distr. and migr.); *Shufeldt*, Anatomical Record, vol. ix., 1915, p. 740, figs. (osteology; relationships); *Swarth*, Condor, vol. xxi., 1919, p. 212 (meas., color of "soft parts," etc.).

IF THE PIONEER West were to choose a bird symbol, none could be more fitting than the Sandhill Crane. Like the buffalo, and the Indian (at his savage best), the crane stands for that type of the wilderness which the white man may obliterate, indeed, but cannot subdue. He is the typical child of the desert, and between him and civilization there is a gulf fixed, a gulf which shot-guns and reclamation projects have done much to widen.

The trouble began, of course, away back, when it was decreed that his flesh was "kosher"—and not only clean but sapid withal, "much resembling that of the Swan in flavor," as Nuttall observes. [Fancy using Swan's flesh as a basis of comparison! Truly we have made *some* progress in the past century.] "In the autumn and winter," Dr. Newberry said, "it [the Brown Crane, i. e. *canadensis* plus *mexicanus*, undistinguished] is abundant on the prairies of California and is always for sale in the markets of San Francisco, where it is highly esteemed as an article of food." Well, it may be true, but that is why the Sandhill Crane has become a tradition in states where it formerly abounded, and a bundle of nerves in most places where it still maintains a foothold.

Alert, wary, and sagacious the Sandhill Crane has always been, for even the hand of the redman was against him. But these qualities have

attained their highest development since the advent of the hungry whites: so that a study of these birds is no longer to be classed as natural history, but only as morbid psychology. Dr. Newberry's testimony,[1] unfortunately brief, deserves exact quotation:

"In August we frequently saw them about the Klamath Lakes, and early in September, while in the Cascade Mountains, in Oregon, the cranes were a constant feature of the scenery of the beautiful but lonely mountain meadows in which we camped. We found them always exceedingly shy and difficult of approach, but not infrequently the files of their tall forms stretching above the tall grass, or their discordant and far-sounding screams, suggested the presence of the human inhabitants of the region, whose territory was now, for the first time, invaded by the white man. The cranes nest on these alpine meadows, and retreat to the milder climate of the valleys of California in winter."

In watching against enemies the crane makes the most of his commanding height; but since he must stoop occasionally to the ground to feed, he requires to be further protected by a surrounding of level stretches in which no possible foe might lurk. In winter the cranes show a marked predilection for islands or river bars. Here, although vigilance may be safely relaxed by the majority, there are always sentinels kept at lookout.

The approach of an enemy is marked by a sonorous challenge,—a mellow, penetrating, powerful note, which seems to hark from the elder Eocene. If this warning is not respected, the bird makes a quick run and springs into the air with a prodigious flapping, which presently smooths out into rhythmical flight, with neck and legs outstretched to the utmost. Meanwhile the bird is blowing his bugle frantically, and if many birds are at it, the syncopated chorus which ensues is one of the most impressive in Nature's oratorio.

In the spring these gracefully ungainly birds indulge in curious antics of courtship. The male bows with outstretched wings and nearly touches the ground with his beak in the extremity of his devotion. The female returns the bow with respect quite as profound, and then they indulge an absurd minuet, swaying, dancing, leaping, and executing high kicks with an entrancing degree of awkwardness. There is no privacy about this phase of courtship, and twenty birds at once may join the giddy whirl which seals the fate of so many young hearts.

A crane's nest is little more than a shakedown, a depression in the soil, or herbage, lined carelessly, or not, with grasses. In placing it the crane takes advantage of some slight eminence, so that she may sweep the landscape with a restless eye, and sneak off laboriously at the slightest

[1] Rep. Pac. R. R. Survey (1857).

suspicion of approach. The two eggs, reckoned among the handsomest by amateurs, are protectively colored to the point of practical invisibility. They are of a warm brownish buff, tilleul buff, as to ground-color, spotted and blotched with verona brown. This is the authentic crane type—faithfully reproduced, for example, in the very different-appearing but structurally related Limpkin, or Crying-bird (*Aramus giganteus*).

The intimate history of the young of this splendid species will probably go unwritten, for we have chosen to make enemies of the Sandhill Cranes. If, indeed, there are any breeding birds of this species left in California, there are probably not above half a dozen pairs all told. The authors of "The Game Birds of California" knew of no positive record since that of Dr. Henshaw, who, on July 29, 1878, took a pair of partly grown young at Fort Bidwell, in Modoc County, although they record, on the authority of Mr. L. Tevis, the occurrence on April 30, 1912, of a pair at Buttonwillow, which seemed to be nesting. I saw a pair of adult Sandhills on the shores of Goose Lake, June 20, 1912; and another pair unquestionably breeding at Eagleville, in the Surprise Valley, on the 30th of June; and again on the 12th of July of that same year.

Taken in Oregon *Photo by William L. Finley*

SANDY, Jr., SHAKES A LEG

Sandhill Cranes are omnivorous feeders, their long stiletto-like beaks being equally suited to spearing grasshoppers, frogs, lizards, crickets and other insects, and to probing the earth in search of sprouting grain or succulent bulbs, such as they love. The birds are capable, on occasion, of rising to such sportive fare as mice and young gophers. Indeed, Nelson tells us that the natives at the mouth of the Yukon raise the young of the related form, *G. c. canadensis*, and keep them about camp because of their usefulness in keeping down vermin. I should be rather chary of keeping such a pet myself, because a crane, like a bittern, if angered or brought to bay, will strike for the eye, and he does not need to strike twice.

No. 302

California Clapper Rail

A. O. U. No. 210. **Rallus obsoletus** Ridgway.

Synonyms.—Salt water Marsh hen. Mud hen.

Description.—*Adult:* Above olive-gray or grayish olive, feathers of back, scapulars, etc., varied by exposed blackish centers of feathers; forehead and fore-crown interspersed with numerous black denuded shafts; a pale tawny or whitish supraloral stripe; chin and throat whitish or palest tawny; fore-neck and breast, broadly, uniform deep cinnamon; lining of wings, axillars, sides and flanks (broadly, sometimes meeting across the middle of belly), and crissum, brownish dusky, coarsely and narrowly barred with white; middle of belly pale tawny; lateral under tail-coverts pure white. Bill and feet (drying) horn-color. *Downy young:* Uniform glossy black. Length (av. of 10 San Francisco Bay bird skins): 368.5 (14.49); wing 163.1 (6.42); bill 60.3 (2.37); tarsus 54.7 (2.15).

Recognition Marks.—Small crow size; olive gray above, reddish below; marsh skulking habits.

Nesting.—*Nest:* In salt marsh near tide gut; a more or less bulky crater of broken grass-stems or dead stalks of salicornia; usually concealed by overshadowing vegetation. *Eggs:* 7 to 11 (12 of record); creamy white to pale buffy (ivory-yellow and cartridge buff), spotted, boldly and sparingly, with chocolate and dark vinaceous gray. Av. of 25 eggs in the M. C. O. Coll.: 42.2 x 30.8 (1.66 x 1.21); index 71.7. *Season:* c. April 10th (March–June); one brood.

General Range.—Resident on salt marshes tributary to Monterey and San Francisco bays. Casually observed north to Humboldt Bay and possibly Gray's Harbor, Washington.

Distribution in California.—Resident in the salt marshes of the southern arm of San Francisco Bay and in the vicinity of Elkhorn, Monterey County. Formerly occurred on the north side of San Francisco Bay, and has been recorded from Tomales Bay and Humboldt Bay. Accidental on the Farallons.

Authorities.—**Newberry** (*Rallus elegans*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 96 (San Francisco and Petaluma); *Ridgway*, Am. Nat., vol. viii., 1871, p. 111 (orig. desc. of *Rallus elegans*, var. *obsoletus*; type locality, San Francisco); *W. E. Bryant*, Bull. Nutt. Orn. Club, vol. v., 1880, p. 124 (habits, desc. eggs, etc.); *Cooke*, U. S. Dept. Agric., Bull. no. 128, 1914, p. 18, map (distribution); *Grinnell, Bryant and Storer*, Game Birds Calif., 1918, p. 283 (desc., occurrence, habits, etc.).

SAN FRANCISCO is a comparatively clean city, as cities go; but San Francisco Bay mud is the deepest and the blackest and the stickiest—in short, the muddiest that ever vexed a poor birdman wanting to get from here to yonder across a half-filled tide-gut. The distance across may not be over a dozen feet—just a little long for jumping, with an uncertain foothold on either bank. What's to do? It is miles around this absurd little artery of the salt marshes. Shall we try wading? Only once! And never again! The mud is unfathomable; and the scuttling crabs, who say it is

easy—well, they lie. What would tempt an honest birdman to tramp these interminable acres of "pickle weed," and to flounder across these interminable mud sloughs, anyway? Obviously, only the presiding genius of San Francisco Bay, the California Clapper Rail. Here comes one of these dandies of the mud, now, a symphony in browns with insertions of white. Stepping forth from the curtain of salicornia, which leans over the sloping sides of the slough, Sir Clapper plants a careful foot, and eyes you quizzically. If passably reassured, he moves over the mud in a gingerly manner, hitching his head and jetting his apology for a tail. He is like a horse with a tight crupper, and his under tail-coverts flash a white distress signal each time he hitches forward. But he is only putting on airs. Let a worm appear on the mud and the Rail seizes it by a nimble dash, in which dignity is utterly forgotten. The worm he bolts on the spot, or else retires to shelter if the victim requires disciplinary measures. If the bird, also, has business on the other side of the slough, he will swim the salty stream, also with a hitching motion; or else he will rise heavily, dragging his reluctant feet ostentatiously through the air, and drop to cover as soon as may be.

For all that we can see, the life of the Clapper Rail is passed in these humble surroundings, amidst endless acres of salicornia (*Salicornia ambigua*), broken only by occasional patches of "greenbush" (*Grindelia cuneifolia*). Nothing more exciting offers in the round year than a drenching storm, or a high tide which floods his meadows, and leaves the birds to swim about disconsolate until the waters are abated. If these portentous occasions occur in November, other Rails, chiefly migrants, are disclosed: namely, the Sora, the Yellow, and the California Black Rails. At such times the gunners used to reap shameful harvests. A rail on the wing is easier to hit than a tin can, anyway, but a rail on the waters is yours for the asking. Being so near to San Francisco, and yielding as they do their decent pound of flesh, the Clapper Rails were unmercifully harried, until the race was well nigh on the verge of extinction. But now that Federal protection has been established, the race bids fair to recover, at least in those limited sections which industry has not claimed, or agriculture "reclaimed."

Our chief interest in the California Clapper Rail attaches to the nesting time. According to Chase Littlejohn, the veteran ornithologist of Redwood City, these rails nest twice in a season, once in April along the banks of the tide channels, and again in June, when they resort to the deeper cover which borders the bay shore. My own information was gathered in two privileged days (April 14, 15, 1911) spent near Redwood City, where I found ten occupied nests. In placing their domiciles, the birds chose only the densest cover, usually that afforded by the little patches of *Grindelia*, which at this season of the year is about two feet high.

Where this shelter is denied them, a heavy stand of salicornia will do, but especially one where drift material is upborne as a sort of canopy by the tops of the growing plants. A heavy platform of similar drift material,

Taken in San Mateo County *Photo by the Author*

NEST AND EGGS OF CALIFORNIA CLAPPER RAIL

dead grasses and dried tule-stems, is built up on the sodden ground to a height of four or five inches. Here in a hollow seven inches across and from one to three inches in depth, a complement of eight or nine eggs is placed. The eggs are of a "lovely" ivory-yellow color, sparingly dotted and spotted with liver-brown or chocolate.

The nest in most cases is approached by a runway, a sort of tunnel driven through the matted vegetation, and this sometimes reaches quite to the bank of the nearest tide-gut. Sometimes the sitting bird will flush only under the tap of a beating-stick—the collector's divining rod—but oftener it manages to anticipate the collector's approach by a run of four or five feet previous to rising. One bird which I put up was so flustered that she fell souse into the water and swam off looking over her shoulder.

Not only have these poor birds suffered terribly at the hands of gunners, but their numbers have been still further reduced by the depredations

Adventure

Light-footed Rail and brood

From a photograph by Donald R. Dickey

Taken near San Diego

of Norway rats, which infest these marshes and which do not scruple to plunder the nests, whatever the stage of incubation reached.

According to Mr. Chase Littlejohn, still another enemy has arisen to make the life of this bird miserable—a certain mussel once imported from the East. This thrifty bivalve flourishes and increases enormously in just that range which has been from time immemorial the peculiar province of the rail; viz., the mud strip just below the line of vegetation on the banks of the tide channels. Now the bird must seek its living here or change its habits entirely. But the mussel is a sensitive, not to mention a supercilious creature, and when our native son steps carelessly, it closes its doors with a bang—and often seizes the hapless rail by the toe.

So common is this that many specimens with maimed feet or missing toes have been taken, and a few have been captured right where they were being held captive by the mussels. Others, more fortunate in escaping, are nevertheless condemned to drag about a ball on the foot, a mass of dried mud and trash of which the mussel is the unyielding nucleus. The bivalve apparently never releases its hold, and even in death, which must soon occur, does not relax its deathly grasp upon its victim.

In one instance at least, a bird was seized by the bill, and although it was able to wrest the bivalve free from its anchorage, the creature had closed upon its beak with such a grip that the bird was unable to get food, and was found in a famished and attenuated condition. This specimen Mr. Littlejohn has in his collection, a mute reminder of one knows not how many scores of similar tragedies.

No. 303

Light-footed Rail

A. O. U. No. 210.1. **Rallus levipes** Bangs.

Description.—*Adult:* Similar to *R. obsoletus*, but slightly smaller and coloration warmer and darker; breast, etc., cinnamon-rufous instead of cinnamon-brown. Bill averaging shorter; feet and legs less robust. Av. of 5 skins: wing 151.1 (5.95); bill 56.3 (2.22); tarsus 52.7 (2.07).

Recognition Marks.—As in preceding species; smaller and darker.

Nesting.— *Nest* and *eggs* indistinguishable from those of preceding species.

Range (chiefly within California).—Resident in coastal marshes from San Quentin, Lower California, north at least to Santa Barbara.

Authorities.—Henshaw (*Rallus obsoletus*), Rep. Orn. Wheeler Surv., 1876, p. 273 (Santa Barbara); *Bangs*, Proc. New England Zool. Club, vol. i., 1899, p. 45 (orig. desc. of *Rallus levipes;* type locality, Newport Landing, Los Angeles Co.); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 32 (s. Calif., nesting dates, etc.).

THERE IS no such conspicuous difference between this species and the northern bird as is indicated by the name *levipes*, although the feet of the females do average *slightly* smaller than those of *obsoletus*. *Levipes* is just as surely a "Clapper" Rail, and this fact should be recognized in nomenclature. Inasmuch as this species was described from a beach near Los Angeles, and inasmuch as Los Angeles is entitled by divine edict (which no one hitherto has presumed to question) to everything in sight, I respectfully propose for this nimble-footed creature the name Los Angeles Clapper Rail. The San Francisco Clapper Rail is manifestly *obsoletus*, but the Los Angeles Clapper Rail, if not strictly *levipes*, is at least *levicor*, as becomes a true-hearted son of the South.

Whatever might be the size, or weight, of our Clapper Rail's feet after a bath, they sustain an emphatic increase whenever the bird essays to wade in the muck. Mucking is the serious business of life, but the Rails react to it as variously as people might. The first bird I ever saw, at Sandyland, was a sorry-looking slattern at best. She had been dabbling as well as wading, and while her feet were several sizes too large for her, as might be expected, her *face* was completely masked in muck, a veritable Dolores of the Swamps.

Taken in San Diego NEST AND EGGS OF LIGHT-FOOTED RAIL *Photo by D. R. Dickey*

Taken in San Diego *Photo by Dickey*

GETTING SETTLED
NEST OF LIGHT-FOOTED RAIL IN SALICORNIA

On another occasion, in late autumn, I saw several of these birds feeding over the shallows of a tidal pool at noonday. Although the place was full of Shore-birds, the Rails were self-conscious and furtive, like overgrown boys. One lonesome hobbledehoy I caught consorting with "peeps." He moved off with violent gesticulations, alternately bowing his head to the water and craning it upward to the utmost. And all the time he jetted the tail, flashing its under white as a sort of staccato punctuation of effort. Upon retiring across the mud, however, my bird acted a little prudish, pausing now and again with uplifted foot, as though looking for the least muddy spot, and withdrawing it again quickly as though its worst fears had been realized.

It is only toward evening that the Los Angeles Clapper Rails become most active. As the sun sets, if the season is right, one may see an anxious mother stealing forth from the edge of the protecting salicornia and leading a little company, six or eight, of tottering youngsters all tricked out in costumes of shining black. Baby rails are ineffably cute. Whether it be the mother instinct or the bear instinct in us, we cannot tell, but I never

meet one of these engaging waifs of the swamp without wanting to squeeze it, real hard.

Eventide, also, is the time for that discursive song which won for our hero the name "Clapper." In a populous marsh one may hear six or seven birds at once uttering these peculiar, strident, iterative calls. The notes are very hard to characterize. Some one, I suppose, must have likened them to the sound of a fence-board struck by a stick. To me they sound more like the cheep of a baby Blackbird greatly exaggerated. With head and neck stretched vertically, the bird delights to roll out ten or a dozen of these notes in a series, *rallentando sostentuto* or *rallentando et diminuendo*, as the case may be.

There is, I suppose, no bird more surely doomed to disappear before the inroads of civilization than this humble resident of our coastal marshes. A mere stretch of level land, *unoccupied*, is an abomination to a Los Angeles real estate agent. He will have it diked and drained and he will cover it with summer hotels, or billboards at the very least. And now that the coastal highway system has been completed, there is not a two by four patch of marsh land which is not ransacked by guns and dogs or small boys a dozen times a year. *C'est le guerre. Que voulez vous?*

No. 304

Yuma Clapper Rail

Rallus yumanensis Dickey.

Description.—Similar to *Rallus levipes*, but outer superior wing-coverts and alula duller and more olivaceous; the coloration of underparts paler; tarsus and bill more slender.

Range.—"So far as known, the fresh water riparian strip along the Colorado River above Yuma, and adjacent irrigation canals in the vicinity of Laguna Dam. The dates of capture, together with a field notation by the collector (May 27, 'laying') definitely indicate summer residence in this region and association. The winter range is at present unknown" (Dickey).

Authority.—Dickey (*Rallus yumanensis*), Auk, vol. xl., 1923, p. 90 (orig. desc.; type locality, Bard, Imperial Co.).

TO MR. DONALD R. DICKEY, of Pasadena, seconded by his able field lieutenants, Messrs. A. van Rossem and Laurence Huey and Mrs. May Canfield (an aunt of the last-named), has fallen the good fortune of writing a considerable amount of ornithological history in California. It was Mrs. Canfield's gun which brought down this *rara avis*, which Mr. Dickey's enthusiasm has elaborated as a new species; and surely great

credit is due both to the lady and her historian, for a fish perambulating on dry land would not be more remarkable than one of these salt-marsh rails in such a distinctly fresh-water association as the banks of the "Rio Colorado." Yet this irruption of a form previously unknown reminds us how little we do know yet of the lagoons and marshy wastes of Lower California and Mexico. Presumably this form, *yumanensis*, is a resident of the extreme delta country which marks the outlet of the Colorado, unexplored, primarily because it is on Mexican territory.

Whether the new Clapper Rail deserves full specific rank may be doubted. Coastal tidewater marshes are necessarily interrupted; and whereas we now insist upon discovering a new "species" in every isolated marsh group, fuller knowledge may reveal the wisdom of recognizing one wide-spread species, viz., *Rallus longirostris* Boddaert, with an orderly sequence of local races up and down both coasts of both Americas. Or at least we have here in the *longirostrimorphs* "a species with the value of a genus."

No. 305

Virginia Rail

A. O. U. No. 212. **Rallus virginianus** Linnæus.

Description.—*Adult:* Above brownish black, the feathers broadly striped laterally with lighter browns (wood-brown, bister, and olive-brown), and shading into burnt umber on wing-coverts and edges of quills; forehead with numerous, enlarged, glossy, black shafts without attendant vanes; a light line over eye in front, and a dusky line through eye; lower eyelid white; sides of head ashy gray; chin and upper throat white; lower throat and breast cinnamon-rufous (Mars brown), growing paler medially and posteriorly; belly, flanks, and lining of wings brownish dusky or blackish, crossed by narrow white bars, lighter, or sometimes almost unmarked fulvous, centrally and on thighs. Bill red, darker above. *Immature* birds show blackish more extensively on underparts. *Downy young:* Uniform glossy black. Length 203.2-266.7 (8.00-10.50); wing 105.4 (4.15); tail 50.8 (2.00); bill 38.1 (1.50); tarsus 33.8 (1.33); middle toe and claw 45.2 (1.78).

Recognition Marks.—Robin size (to appearance); marsh-prowling habits. The long reddish bill and rufous coloration serve to distinguish this bird from the following species.

Nesting.—*Nest:* Of sedge and grasses in tussock of swamp. *Eggs:* 6 to 12; creamy white or pale buffy (ivory-yellow to pale vinaceous buff) of noticeably lighter coloration than those of succeeding species); spotted and dotted with reddish brown and vinaceous gray. Av. size 31.8 x 24.1 (1.25 x .95). *Season:* April–June; one brood.

General Range.—North America. Breeds from the southern Canadian Provinces south to the Central States, and coastwise to North Carolina and southern Cali-

fornia; also "in Toluca Valley, Mexico" (A. O. U.). Winters from Oregon, Utah, and Colorado, south to Lower California and Guatemala; in the lower Mississippi states and from North Carolina to Florida.

Distribution in California.—Common summer resident in fresh water marshes throughout the State, breeding south to Escondido, San Diego County. Fairly common winter resident west of the Sierras both in fresh and salt marshes, north at least to Suisun (M. V. Z.) and Tomales Bay (Mailliard).

Authorities.—**Newberry** (*Rallus virginianus*), Rep. Pac. R. R. Surv., vol. vi., 1857, p. 96 (Vacaville, etc.); *Willett*, Pac. Coast Avifauna, no. 7, 1912, p. 32 (s. Calif., nesting dates, etc.); *McLean*, Condor, vol. xviii., 1916, p. 229 (Mariposa Co., nesting habits).

GIVEN an oasis of water of, say, two acres extent, in a pasture desert of barren green; crowd a company of willows into one end; add a half acre of bogs crowned with rose bushes; then a little space of clear water; then a jungle of cat-tails at the other end; surround the whole with a thirty-foot border of sedges and coarse grasses cropped close on the desert side, and you have an ideal home for the Virginial Rail and his kind. Poke about carefully in the edge of the rose-bog and you will soon start him, a sly reddish bird with a red eye and a longish beak. See him some ten feet away standing at the edge of cover, all alert, one foot uplifted and with claws curled down; or when he plants it gingerly, he alternately perks and lowers his head, as though divided in his mind between darting away and facing it out with you. Simultaneously he cocks his tail forward and relaxes it nervously. If you succeed in looking sufficiently disinterested, he will snatch a slug hastily and watch you furtively with a blood-red eye, to note whether you approve of such actions. If you pass all the tests of good behavior during the first five minutes, the gentle bird will relax his vigilance and show you how he can walk over half-submerged vegetation without sinking very deep himself, or if in the passage from bog to bog he comes to a space of clear brown water, he will swim as lightly as a duck, but with that odd bobbing motion peculiar to his race. A single false motion, however, will send him scuttling off through the plant-stems and out of sight in a twinkling, cackling in alarm and dudgeon.

But splash you around never so bravely in hip-boots, or wait you never so patiently, the feeling grows upon you that you are an outsider, so far as the more intimate interests of the swamp are concerned. There is much trafficking in the sedges, which is not meant for human eyes, and the revealing of the life of any rail is much like the natural history of a shooting-star,—one flash, one history. But the shy birds are brave in voice. As the male rail wanders about uneasily in early April searching for a mate he cries, "*Keg, keggy, keggy, keggy,*" in tones which convey an impression of a much larger and fiercer bird. The anxiety of a female for her

young is betrayed by a mournful *ki-i* or by short phrases of creaking notes. If the young are in hiding, a low cluck of reassurance will bring them scurrying to find their mother.

A hummock of grass or a patch of thickset cat-tails, whether in a fresh-

Taken in Washington *Photo by the Author*

NEST AND EGGS OF VIRGINIA RAIL

water or a brackish marsh, is usually selected as a nesting place. The water of the swamp may be only an inch or so in depth or it may be a foot, but the bird breaks down the grasses until she has a reliable foundation a few inches above the water. On this she piles dead grasses or broken cat-tail leaves and hollows them out to some semblance of comfort. The bird is a close sitter and usually flies when first flushed. She is rather careful not to be caught a second time, however, and will glide off quietly and invisibly if the visitor insists upon recurrent visits. If the eggs are handled in her absence, the owner is likely to destroy them upon her return; and Mr. J. H. Bowles has a set which he rescued nearly in time, with only one of its eggs pierced clear through by a thrust of the bird's long beak.

The eggs, averaging fewer in number than the Sora's, may be cer-

tainly distinguished from them by their lighter creamy or grayish white tone, as well as by the clearer red of their markings.

Mr. Donald W. McLean, of Coulterville, has given us an interesting account[1] of a pair observed near his home. There were ten eggs in a "tower-like structure of flat marsh grasses," on the 5th of June, 1916, and incubation had apparently begun. "On June 19th, there were six coal-black young in the nest. They had black-ringed pink bills, and their feet were very large in proportion to their bodies. Now the demeanor of the female changed. She forgot her shyness and walked about in the open within three feet of where we stood. She fluffed up her feathers after the manner of a sitting hen, and uttered many clucks and whistles which were answered by the shrill whistle of the male. He was not so brave as she and did not show himself except at intervals. On this same day several of the young clambered out of the nest into the water. We replaced them and quitted the vicinity so as not to disturb the family."

No. 306

Sora Rail

A. O. U. No. 214. **Porzana carolina** (Linnæus).

Synonyms.—Carolina Rail. Sora. Soree.

Description.—*Adult:* Above olive-brown varied by black and white in spots and stripes on back and scapulars,—the black broad and central, the white narrow and marginal; region about base of bill, chin, throat, and median crown-stripe black; cheeks behind, sides of throat, and breast bluish ash; below olive-brown to dusky, sharply barred with white, whitening on middle of belly; under tail-coverts tawny or tawny-washed; wing-quills fuscous; edge of wing and of first primary white. Bill yellow, darkening on tip of upper mandible. *Immature:* Without black on head and neck; chin whitish; throat and breast washed with light brown. *Downy young:* Sooty black, the down interspersed sparingly with longer glossy black hairs; a tuft of bright orange bristles on throat,—stiff and inclined forward and a bright red excrescence at base of upper mandible. Length 203.2-241.3 (8.00-9.50); wing 106.7 (4.20); tail 50.8 (2.00); bill 21.1 (.83); tarsus 34.5 (1.36); middle toe and claw 47 (1.85).

Recognition Marks.—Towhee size, but stouter in appearance; marsh-skulking habits; *short* yellowish bill.

Nesting.—*Nest:* A raised platform of grasses and sedge, usually placed centrally in grass tussock of swamp. *Eggs:* 6 to 15; dull buffy or ochraceous buff (and so darker than eggs of *Rallus virginianus*), spotted and dotted with dull chocolate and vinaceous gray. Av. size 31.5 x 22.9 (1.24 x .90). *Season:* c. May 20; one brood.

General Range.—Breeds in temperate North America from southern California, Utah, Kansas, Illinois, and New Jersey, north to central British Columbia, southern

[1] The Condor, Nov., 1916, p. 229.

Mackenzie, and the Gulf of St. Lawrence. Winters south from northern California, Illinois, and South Carolina through middle America to Venezuela, Colombia, and Ecuador. Of the widest occurrence during migrations.

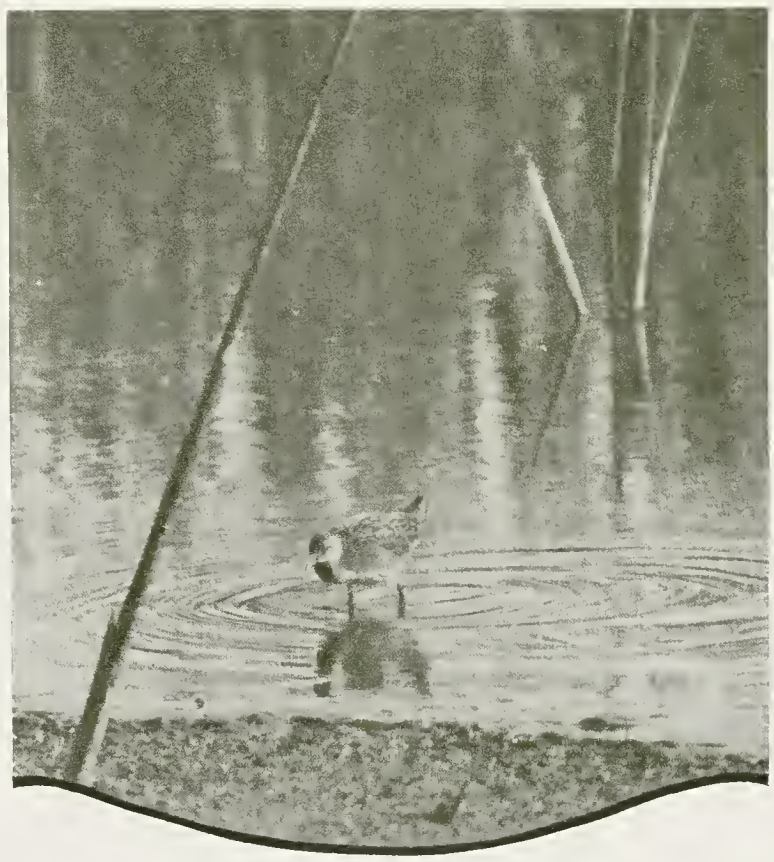
Distribution in California.—Common summer resident, chiefly in fresh water marshes throughout the State. Also common in winter in fresh or brackish marshes west of the Sierras, north (at least) to Butte County. Widely dispersed during migrations.

Authorities.—Cassin (*Porzana carolina*), in Baird, Rep. Pac. R. R. Surv., vol. ix., 1858, p. 749 (Colorado River; San Diego); *Shufeldt*, Jour. Comp. Medicine and Surgery, July, 1888 (16 pp.), 7 figs. (osteology); *Ray*, Condor, vol. xv., 1913, p. 111 (Lake Tahoe; desc. and photos of nest and eggs).

"AS THIN as a rail" does not refer to the Lincoln variety of split trees, but to this bird and its congeners. The birds are bilaterally compressed in order to enable them to slip readily between the close-set stalks of vegetation. And this they do with almost incredible rapidity, and without leaving a wake of motion by which they may be traced.

Like the California Clapper Rail, the Sora rises to a dog; or if caught feeding inshore some little way from his watery fastnesses, he flits over the tops of the reeds, drops down suddenly, and loses himself immediately in the maze. It is idle to follow him when alarmed, for he will not rise again save under exceptional circumstances. Immense numbers of these birds used to be slaughtered yearly, especially along the Atlantic Coast. They have this at least to recommend them,—that they are easy practice for juvenile hunters. They afford less meat, however, than so many English Sparrows, and qualms of conscience make poor sauce.

Though rightly counted shy, the Sora possesses one trait which brings it into frequent notice—curiosity.



Taken near Santa Barbara *Photo by the Author*

STOP! LOOK! LISTEN!

Often when I have been lying in a boat waiting for ducks, among the aquatic plants, some little distance off-shore and removed from the usual haunts of the Sora, I have heard sundry *keks*, half apprehensive, half quizzical, followed by the plashing of light feet as a troop of the little rails worked their way out and surrounded me, under pretense, indeed, of searching for food, but being too plainly prompted by inquisitiveness. Dr. Howard Jones tells of similar experiences: "I have had them come up to me and peck my gum boots, and play with the gun barrel as a bantam rooster does when teased."

Or if the bird will not show himself, a sudden clapping of the hands will betray him into startled ejaculation. Making the Sora "speak" is no end of fun; and if one is intent upon making a record horizon of birds, it is almost necessary to try one ruse or another. Often and often have I flung a stone or a stick of wood into a wayside clump of tules to be rewarded instantly with a shouted *crick creek croo*, satisfying evidence that the Sora is on the job.

A slight platform of rushes or a shallow basket of woven cat-tail leaves and grasses serves this bird for a nest. A site is chosen anywhere in the

Taken on Big Bear Lake *Photo by W. M. Pierce*

NEST AND EGGS OF SORA RAIL, HATCHING

swamp, but usually in a rather open situation. Sometimes a tussock of grass is used, and the growing blades curl over to conceal this anchored ark of bulrushes. The Sora is a little more prolific than her cousin, the Virginia, a dozen eggs being commonly found, and fourteen and fifteen not infrequently. In the latter case the eggs are apt to be in two layers. The ochraceous cast of the ground-color is unmistakable, and the spots are both more numerous and of a duller brown than those of *R. virginianus*.

Taken in San Diego *Photo by L. Huey and D. R. Dickey*

SORA RAIL: A "HAND-PICKED" SPECIMEN

Nothing could be at once more interesting and more comical than the appearance of a young Sora just out of the shell. He is, to begin with, a ball of down as black as jet, and he has a most ridiculous tuft of orange chin whiskers. Add to this a bright red protuberance at the base of the upper mandible and an air of defiance, and you have a very clown. And such precocity! Once, in a secluded spot, I came upon a nestful at the critical time. Hearing my distant footsteps most of the brood had taken to their new-found heels, leaving two luckless wights *in ova*. At my approach one more prison door flew open. The absurd fluff-ball rolled out, shook itself, grasped the situation, promptly tumbled over the side of the nest, and started to swim across a six-foot pool to safety.

A lifetime of prowling in the swamps will not give a person any adequate conception of the total number of Sora Rails. From the migrations, however, we are able to guess that it must be enormous. During the migrations, which take place at night, the birds straggle over the landscape at low elevation and quite irrespective of the fly-lines observed by many other species. As a consequence, many Soras fall victim to telephone wires or even barb-wire fences; and not a few are picked up in town in the street or in the garden, or wherever dawn has overtaken the weary traveler. Such an occurrence affords the man on the street his only glimpse of this pixy of the marshes, which makes appeal alike for its oddity and for its

philosophical acceptance of strange surroundings. The stranger is plied with unwelcome dainties (he prefers bugs and worms of his own choosing); and the upshot is that the museum man receives by post a few days later an ominous little box, which by reason of its frequency and flatness he knows to contain the sad remains of *Porzana carolina*, "as thin as a rail."

No. 307

Yellow Rail

A. O. U. No. 215. **Coturnicops noveboracensis** (Gmelin).

Description.—*Adult:* Upperparts, sides, and flanks chiefly black, exquisitely marked in large pattern by fine bars of white, and interrupted, especially on back and wings, by parted lateral edgings of ochraceous; middle of belly white; throat and breast rich ochraceous tawny (sayal brown to cinnamon-brown), with obsolete barring of dusky, clearing and paling on chin to buffy, changing on sides of head, neck, and breast through finely clouded mixture of black, white and tawny to pattern of upperparts; bend and edge of wing white, as also much of the wing-lining. Length 152.4 (6.00) or 177.8 (7.00). Av. of five California specimens: wing 85 (3.35); bill 12.7 (.50); tarsus 24.5 (.96).

Recognition Marks.—Actually sparrow size, but appearing larger; marsh-skulking habits; yellowish brown coloration with size distinctive.

Nesting.—*Nest:* A hollowed cushion of coiled grasses raised above shallow water or moist ground, usually well concealed and marked by wisp of dead grass or hay. *Eggs:* 7 to 9; ivory-yellow or cartridge-buff, finely spotted with reddish brown (hazel to chestnut), the spotting usually confined to a cap, more rarely wreathed or scattering. Av. size 26.2-30 x 19.6-22.1 (1.03-1.18 by .77 x .87). *Season:* June; one brood.

General Range.—Temperate North America; breeding from southern Mackenzie, central Keewatin and southern Ungava south to Maine, Minnesota and South Dakota. Winters in North Carolina, the Gulf States, and California.

Occurrence in California.—"Rather rare winter visitant to marshes of west central California" (Grinnell, Bryant and Storer). Sporadically abundant, as revealed by high tides. Also recorded for Humboldt, Riverside, and Orange counties.

Authorities.—**Cooper** (*Porzana noveboracensis*), Proc. Calif. Acad. Sci., vol. iv., 1868, p. 8 (Martinez and San Francisco Bay); *Cooke*, U. S. Dept. Agric., Bull. no. 128, 1914, p. 31, map (distr. and migr.); *Grinnell*, Pac. Coast Avifauna, no. 11, 1915, p. 47 (status in Calif.); *Dawson*, Jour. Mus. Comp. Ool., vol. ii., 1922, nos. 3-4, p. 31 (Mono Co., desc. nest, eggs).

IN ORDER that my readers may see how ornithological history is sometimes made "while you wait," I give below the account as originally prepared for these pages six years ago. To this I append an exact reproduction of the account appearing in "The Journal of the Museum of Comparative Oology" (Vol. II., Nos. 3-4, Oct. 26, 1922, pp. 31, 32) under the

caption, "A New Breeding Record for California," by William Leon Dawson. In the same issue of the Journal appears a comprehensive article by the Rev. P. B. Peabody, who has followed the fortunes of this rare species for twenty years past, in North Dakota, and who probably knows more of its habits and nesting than all other observers combined.

Perhaps there is not another bird in America of fairly general distribution of whose habits and life history so little is known as of the Yellow Rail. Of its notes, indeed, much has been written, but little has been agreed upon. The voices of the marsh are often emphatic enough and sometimes thrilling, but they remain voices of mystery. Nests have been found, but the nests of the Yellow Rail are rarer than those of any of the Little Black Rails. Its comings and goings are only dimly outlined by the revelations of entangling fence-wires or of merciless high tides.

According to Mr. Chase W. Littlejohn, this is one of the species exposed by the November high tides which cover the San Francisco marshes. At such times the birds have been seen by scores swimming restlessly from clump to clump over the inundated flats. At all other times the bird

Photo by Norman A. Wood

YELLOW RAIL IN CAPTIVITY

trusts rather to its amazing ability to thread the maze of salicornia or grass-stems unseen, and is one of the hardest of birds to flush. So great is the bird's reluctance to take wing, that when fairly cornered it will sometimes allow itself to be picked up by hand rather than attempt to fly.

That the Yellow Rail winters with us, at least upon the marshes tributary to San Francisco Bay, there can be no doubt. It is almost equally certain that the bird does not breed in the State, nor indeed anywhere west of the Rocky Mountains. It is rather one of those species which, like the Marbled Godwit, nests in the Dakotas and the northern interior generally and comes west, as well as south to California, to spend a restful winter. There are two records for southern California based on specimens, and one sight record for Santa Barbara[1] in which I do not myself place implicit confidence.

Taken in North Dakota *Photo by Rev. P. B. Peabody*

n/8 YELLOW RAIL, IN SITU
INVESTING GRASSES PARTED

"The heavy snows of the past winter, the deepest in decades, convinced us that there was no need for haste. So as we skirted, on the 6th day of June, the eastern bases of the Sierra Nevada Mountains en route to Mammoth Camp, we accepted the challenge of a Yellow-headed Blackbird sounding from a wayside swamp and deployed for investigation. The place was Long Valley, a well-watered plateau in southern Mono County, and the altitude was something over 7000 feet. I had passed the swamp unheeding a dozen times before, in previous seasons; but one of my assistants, Lawrence Stevens, had never seen a Yellow-head's nest, and was curious. A broad stretch of shallow water, say quarter of a mile wide and a mile long, is here fed by mountain springs, and bears a complete investiture of rank grasses or dwarf sedges, save where, centrally, it supports low beds of tules, or irrupts in pools so charged with mineral content that vegetation will not grow. Cattle tramp the edges in droves, but apparently avoid the central portion of the swamp because of its treacherous nature.

[1] Dec. 26, 1914. Reported in Bird-Lore, Vol. XVII., Jan.–Feb., 1915, p. 47.

"On the way we found a belated nest of Cinnamon Teal, n/9, and in a central tule patch a solitary nest, n/4, of the Yellow-headed Blackbird. Wilson Phalaropes were hooting at us; and a persistent search for eggs of this species yielded such good returns that we decided to return to our abandoned camp for lunch, and to put in the afternoon with a drag rope. Accordingly, we re-entered the swamp at two o'clock. Stevens and our old-time mascot, Robert Canterbury (now 19), manned the rope; while I floundered along behind, marking the rare irruptions of startled nesters. A nest of the Savannah Sparrow, n/5, with fresh eggs, very light in coloration, was the first find; and a Sora Rail's nest with only two eggs, apparently incubated, the second.

"We were dragging a rather thin stretch of marsh grass when a Jack Snipe flushed and I called Stevens to my assistance, leaving Bobby, who was more remote, standingly listlessly by his rope-end. Returning from a fruitless quest, we were about to resume operations when Bobby exclaimed, 'Well, look at this!' He had been standing all the while within

Taken in North Dakota *Photo by Rev. P. B. Peabody*

n/9 YELLOW RAIL, A TYPICALLY MARKED SET

three feet of a low-lying cushion, which held, in a compact and perfect circle, eight fresh eggs. The cover of marsh grass was scanty, not over eighteen inches high, and the water shallow—an inch or so; yet there was no trace of a bird about. The eggs were 'different'—no doubt of that; much smaller than those of a Sora, which we had, fortunately, just examined; of a dark, old-ivory color, heavily sprinkled, almost capped at the larger end, with rich reddish brown spots. The nest itself was noncommittal, a well-rounded and rather deep bowl of coiled grasses, three and a half inches across by two in depth inside, built up to a height of three inches clear of the water. Notably, there was present a leaning and overshadowing wisp of dead grass. I considered the exhibit long and carefully, too sobered, for once, to render snap-judgment. The boys became impatient and pressed for an expression of opinion. Finally, I said, 'Well, boys, to the best of my knowledge and belief, these are eggs of the Yellow Rail (*Coturnicops noveboracensis*), the first breeding record for California, and the first set ever taken west of the Rocky Mountains.'

"We left the eggs undisturbed and tagged the spot with cotton tufts. Returning ten minutes later, I found no bird. Returning again after half an hour and stooping over the nest attentively, I saw that one of the eggs had been moved, pried over on top of the others. Then the bird's nerves gave way, and she flushed from a spot two feet beyond the nest and not over five feet from my face. I watched her keenly, as with feeble, vacillating flight she passed at a height of two or three feet above the sedge-tops, and plumped down some seventy-five feet away. The bird was unmistakably smaller and otherwise different from the Sora, which we had recently observed, also in flight. I got no impression of yellow; but since the flight of the bird was quartering against the sun, that is not surprising.

"Although we spent another day in the swamp, we saw no further trace of Yellow Rails, unless a nest 'ready for eggs,' discovered by the boys but unseen by me, belonged to this species.

"Compared in the cabinet with a set, n/8, of Yellow Rail's eggs, taken last year by Rev. P. B. Peabody, there can be no possible doubt of the correct identification of these Long Valley specimens. I quite agree with Mr. Peabody that they are absolutely unlike the eggs of any other American species. The eggs were slightly incubated, and the albumen so stiff that it was rather difficult of removal. The set, R110—8-22, averages mm 28.8 x 20.4 in dimensions, and the ground-color is a trifle darker than that of the North Dakota specimens."

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